1984

Making routine curriculum changes at the College of William and Mary in Virginia: Are faculty influenced by trends in students' pursuits?

Anne M. Pratt

College of William & Mary - School of Education

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Pratt, Anna Moore

MAKING ROUTINE CURRICULUM CHANGES AT THE COLLEGE OF WILLIAM AND MARY IN VIRGINIA: ARE FACULTY INFLUENCED BY TRENDS IN STUDENTS' PURSUITS?

The College of William and Mary in Virginia

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Pratt, Anne Moore

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Making Routine Curriculum Changes at The College of William and Mary in Virginia: Are Faculty Influenced By Trends in Students' Pursuits?

A Dissertation Presented to The Faculty of the School of Education The College of William and Mary in Virginia In partial Fulfillment of the Requirements for the Degree Doctor of Education

by Anne M. Pratt 1984
Making Routine Curriculum Changes
at
The College of William and Mary in Virginia:
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Students' Pursuits?
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To all who have learned with me along the way -- my parents, my family, my friends, my colleagues, and my associates -- I am now and I shall remain extremely grateful.
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Chapter One

"It may be useful to ask whether a detailed examination of curriculum drift ... shows movement that is consistent with the idea of organizational adaptation."

Curtis L. Manns and James G. March

Introduction. Research exists on change in colleges and universities that examines the undergraduate curriculum—what about it changes and what does not, how parts of it change or do not, why change occurred or did not, should curricular change be encouraged or not. Indeed, the curriculum represents a logical point of departure for studying change in academic organizations since it has been described as "the major statement any institution makes about itself," and, as such, as difficult to change as a graveyard is to move.¹ The basic course offerings in a college or university are one important indication of what an institution is about. Further, the ways in which faculty organize and present these offerings not only define the curriculum to students but also seem resistant to great change.

Viewing the curriculum as an arrangement of courses lying at the heart of undergraduate education has conceptual significance for research on colleges and universities. First, examinations of curricular change should help to illuminate generally those parts of colleges and universities that seem essential or vital to existence. Second, the research can more specifically and systematically seek out important connections among parts of colleges and universities for their relationship to organizational change. Third, and perhaps most important, the research can address more fully the complex relations
between form and substance in educational institutions. For example, fuller examinations may evolve of the relations between academe's rules and routines and the learning processes which colleges and universities seek to encourage.

Context of the Question. The undergraduate curriculum engages numerous participants--faculty, administration, governing boards, and students. Each of these groups has received a fair amount of attention regarding their various influences on the curriculum. Students, however, tend to be treated differently from faculty, administrators, or governing boards, and this treatment leaves a void in the literature. For example, faculty, administration, and governing boards receive considerable scrutiny as organizational participants who make decisions that effect changes in curricula. There is abundant literature on the influence of people like Mieklejohn or Dewey, or of faculty at Harvard, Columbia, or Yale, or of administrators like Kerr, Hesburgh or Eliot. These people receive consideration largely as they participated in making decisions that resulted in changing curricula.

Students, in contrast, are largely reviewed as the group to be changed, as the group undergoing various kinds of change, or as the group expecting to be changed. Where students have received consideration as fullfledged participants in changing a curriculum, they were the authors or activators of a particular innovation or reform. These approaches to student influence on curriculum change, in turn, appear as extreme ends on a continuum of related research topics. At one end of the continuum, students are the objects of
change; and at the other end, they are the authors of change. The lack of substantive discussion and research on the continuum of related subjects that fall between students as activists for change and students as objects of change is noteworthy. For instance, the research does not fully address the possibility that students could consistently avoid taking a course and thus contribute to a decision to drop a course from the curriculum or, the reverse, to make the course a requirement. In either case, one could say that students' behavior did influence a faculty decision to effect a curriculum change. To examine such a possibility was an aim of this research. Specifically, this study sought to discover whether faculty perceived themselves to be influenced by what students were taking as they made decisions to change an undergraduate curriculum.

Because faculty make yearly changes in courses by altering numbers, titles descriptions, credits, and the like, these kinds of curricular adjustments offer a good point of departure for such a study. Where basic educational policy remains the same and students are asked to pursue their degree programs according to a consistent basic program arrangement, the regular curricular adjustments within a basic educational policy may be more readily examined. These regular adjustments could consist of changes in titles or descriptions, in course numberings, in credits for majors, in course additions, deletions, or modifications, in prerequisite requirements, or in any other course designations that aid students in organizing a course of study. These kinds of changes, in turn, make up the normal drift of a curriculum.
Students remain in constant interaction with the curriculum of an
institution as they take courses and pursue majors to earn a degree.
Institutional records like catalogs or minutes of educational policy
committees, show the drift of a relatively stable undergraduate
curriculum by revealing the effects of decisions to change certain
curricular parts. Course by course enrollment tallies within each of
an institution's program offerings reveal the effects of students
requesting and taking courses and pursuing certain majors. Since
students engage a curriculum as they take courses and pursue majors,
one may therefore ask whether their participation influenced faculty
in their curriculum change decisions. In short, did the trends in
students' pursuits influence faculty decisions to make changes?
Looking at these two distinct trends in recorded effects alone will
not answer this question since the two trends represent distinct
descriptions of different phenomena. Thus, whether faculty attended
to what students took when deciding to change curricula remains in
question. Examining faculty perceptions of that question was a
research need and the aim of this research.

Research Question and Design. This research sought to examine
faculty perceptions of the influence of students' pursuits on routine
changes in a curriculum. Specifically, two research questions asked:

1) Do faculty attend to students' pursuits of certain majors when
   making changes in a curriculum?
2) Do faculty attend to the courses students are taking when
   making changes in a curriculum?
A case study was conducted of the undergraduate program in three Arts and Sciences departments and two professional schools at The College of William and Mary in Virginia. Six kinds of changes in the curricula of the five programs were reviewed. The six curriculum changes were organized under three headings as follows: aspects of appearance -- 1) course numbering, 2) course title or description; aspects of opportunity; 3) course additions, deletions, or modifications; 4) credit requirements for majors; and aspects of accessibility; 5) area/sequence designation (a course designation characteristic particular to the curriculum studied); and 6) prerequisite designation. (The curriculum variables and grouping of variables by aspects were chosen to approximate concepts presented by Curtis Manns and James March in a related study.) At the same time, the concurrent student enrollment patterns in each program were reviewed. Curriculum change and student enrollment data were collected for the academic years from 1971-72 to 1980-81. Such a longitudinal perspective provided an opportunity to view what approximately seven generations of undergraduate students had taken in five subject areas along side of the six kinds of changes in each program's curriculum. The case analysis included not only a review of curriculum and enrollment records in each subject area, but also interviews with academics who participated in making the curriculum changes reviewed. In this way, the research sought to discover from the people involved in making the changes, what kinds of considerations had informed their decisions.
The research also attempted to extend the work of Curtis L. Manns and James G. March. In a study of curriculum change at Stanford, which was published in 1978, Manns and March concluded that curricula do change in response to financial adversity. In addition, Manns and March suggested that in other American institutions curriculum changes might look different from those at Stanford, since funding ties to student enrollments will vary from one institution to the next. For example, curriculum change might look different at a distinctive public university from change at prestigious, private Stanford: the ways and means of acquiring funds from various sources might differ from one institution to another, in general, from prestigious private to public institutions, in particular. Focusing on part of the theoretical perspective advanced by Manns and March (as it relates to earlier work by March and Simon), this study sought to examine whether faculty in a distinctive public university viewed students' pursuits as an influence on decisions to make routine changes in the curriculum.

This research selectively focuses on the portion of Manns and March's theoretical perspective that deals with student enrollments as a factor in institutional adaptation responses. This delimitation has the effect of training the research perspective on internal academic organization. In keeping with Manns and March, then, this study proposes that enrollments represent an important consideration in internal curriculum decision-making by faculty in colleges and universities. Student enrollments constitute one significant form of currency which faculty, deans, and department chairs must consider and
use as they negotiate the business of academe. As such, the influence of student enrollment trends on one kind of adaptive response—routine curriculum changes—exists as an important research focus.

After reviewing curriculum variables similar to those used by Manns and March, the investigator next asked those who had made the changes how the changes had come about. Asking people about the kinds of things that informed their decisions represents an examination of information feedback. Did the information provided by students as they took courses and pursued majors influence the changes that the faculty made? To answer this question, the research sought to examine an information feedback process to discover whether what students took influenced change in an undergraduate curriculum.

Discussion. As organizational participants, do students influence curriculum change? Why or why not? The information provided by students as they regularly take general courses and pursue specialized majors, comprises a significant portion of that which describes an institution, in general, and a changing curriculum, in particular. The ways in which people receive and use this information can also affect the description of a curriculum. In this way, student participation may influence change if faculty attend to the trends in participation. For instance, after watching many math majors over a period of years take more and more computer science courses, a faculty may decide to offer a computer science major where none existed before.

Each era's students have contributed to the description of the institutions they attended. Some students of the 1960's, for instance, have been depicted as questioning the relevance of college
curricula as well as the *raison d’etre* of higher education in American society and, in doing so, influencing some of that decade’s curriculum changes. Even as student activism or student initiated reform drew attention in the sixties to extreme aspects of change, so could these same actions (even if the activism was not pervasive) suggest the pervasiveness of students’ influence as organizational participants. Student influence could, moreover, appear as a persistent influence if one assumed that students’ activist participation did not occur as a result of an isolated incident. 4

In this view, activism would exist on a continuum of student activities. At one end, student participation may be visibly active, as certain student activists of the sixties have been characterized. At the other end, student participation may be less visibly active, as when students are less vocal in their pursuit of higher education. Interestingly, in research that looked for persistent student influences as formal organizational participants, some investigators concluded that the impact of student activism on either the university or the student community could best be described as “mixed.” 5 Where students had gained representation on university committees, sometimes they were actively involved and results were apparent; sometimes they were not; and sometimes they did not have the time, experience, or knowledge felt necessary to affect substantive decisions.

Other research also found mixed results from student participation. In a study that looked at formal university governance mechanisms, David Dill concluded from four case studies that direct student participation in making academic decisions (e.g., those
required to make regular curriculum changes) was marked by a lack of sustained student representation and a failure to exert influence in commensurate proportion to the numbers of students involved in the educational enterprise. But, in an attempt to look at direct participative influences on formal organization and governance mechanisms that underpin academic curricula, the inquiries overlooked the more indirect, yet highly participative influence present as students enrolled in courses and pursued certain majors. In other words, while much of the literature on university organization, governance, and curricula sought to deal with those individuals or groups who appeared to make decisions effecting change, a continuing pattern of enrollment may have established a foundation that could have influenced decisions to make curriculum changes. For instance, if enrollments remained low in a subject area, did faculty decide to change parts of the curriculum to draw students back? Or if a subject area was constantly heavily oversubscribed, did faculty decide to make entry into that area more difficult?

Do the curricula of academic institutions change in response to student enrollment trends? In one approach to address this question, the courses and majors undertaken by students may be viewed as reflecting certain needs of the larger society. For example, if a large proportion of students pursued engineering as a major, it could reflect a larger, stated social need for more engineers during an era. Or if more students were studying to be teachers, that could represent the stated need of the larger society for more teachers. So also could students pursuing various other majors mirror the stated need of
the larger society for an educated citizenry. In any of these examples, moreover, students may be viewed as representatives of the society in which they function. One can, in turn, argue that institutions need to remain responsive to the societies they serve in order for both to benefit from the exchange. Students come to college for many reasons, however: some attend college to acquire skills for particular professions; some to learn more about certain subject areas; some to be with their friends; some without discrete reasons. Students needs, in this context, are many and may or may not reflect larger social needs. Being responsive to student needs also can look quite different in intent from adapting to the needs of the social environs.

At one end of a continuum, adapting to the environment could take the form of attending primarily to maintaining student enrollments to keep an institution operating (with scant attention paid to the educational experience). At the other end, adapting to the environment could also take the form of instituting programs that look popular or desirable due to labor market demands at a particular time (with scant attention paid to the program's long-terms effects, requirements, or merits). The intent of both kinds of adaptivity derives from wanting to maximize chances of institutional survival. Responsiveness to student need, in contrast, treats institutional survival as a necessary constraint, not as an end.\(^7\) Having enough students and labor market demands remain important considerations. But enabling students to meet the changing circumstances which they will encounter throughout life retains a central position in this view.
of response to students need. This, in turn, reflects the needs of
the larger society for a productive citizenry that can change or grow
in healthy ways when the need to do so arises. If the institution
meets such a legitimate social need consistently and well, the
institution survives along side of the people whose needs it serves. 8

This study focuses on changes internal to an institution and on
students' participation in an institution as it may reflect their
needs. More specifically, this study examined this question: If
students' pursuits do represent certain social information do faculty
attend to it? By examining a feedback process, this study sought to
discover what kinds of considerations had informed faculty decisions
to change a curriculum. In this manner, the study sought to discover
whether faculty perceived students' pursuits to be an influence on and
curriculum change decisions.

Definitions and Assumptions. To conduct this research, several
definitions and assumptions were necessary. The first assumption
involved a view of a college or university as a complex organization. 9
This research also treats the curriculum as an integral part of an
academic institution. In this analysis of a college curriculum, the
orientation is toward examining what students took during a certain
period, the information that academic professionals associated with
what students were taking, and the adjustments these professionals
made in the curriculum during that time. Changes in course titles and
descriptions, course numberings, course addition, deletions, or
modifications, credit requirements, area/sequence designation, or
prerequisite designation were assumed to adjust or change a
curriculum's description. The terms, college and university, refer exclusively to the four year undergraduate experience. Similarly, the term, curriculum, means a formal guide for undergraduate education.

A college curriculum comes alive through the combined efforts of the community of people involved in an institutional endeavor. People use such terms as courses, departments, general education requirements, concentration or specialization requirements, and degrees to talk about a curriculum and the form a curriculum takes.

Furthermore, these curricular terms and arrangements--how courses are numbered, named, described, in what order courses will be taken--can be complicated and embody many discrete kinds of routine understandings. For example a course offering exists as a concrete entity that has a beginning, an ending, and extends over time. Course numbering, course titles, and course descriptions help to describe a course. Distribution and specialization requirements are arrangements that affect how students organize a program of study, as are any special designations (like pre-requisite notations or other special notation). A major can be viewed as the arrangement of all courses undertaken by a student in a specific subject area during a certain time. Subject majors, concentrations, or specialization areas are terms used interchangeably here to refer to the formally noted area of study in which a student receives a degree. Another important consideration is the total number of courses and major programs that comprise a curriculum at a given time, for their availability in both the short and the long run is not only the subject of decisions made by department chairmen and deans, but also is the subject of decisions
made by students.

The six curricular variables examined in this study are those things routinely used to describe educational programs: course numbering; course titles or descriptions; course additions, deletions, or modifications; credit requirements for majors; area/sequence designation; and prerequisite designations. In turn, change will refer to alterations in these six variables that may or may not include change in the educational policy of the institution. For example, a change in course content or a change in course title would both be treated as changes, since from one time and place to another, change in kinds of information occurred. Finally, this study assumes that many of the elements under consideration--courses, credits, degrees--represent some of the most durable forms in American higher education.11

Students take courses and pursue majors that faculty make available in the curriculum. The data regarding courses and majors undertaken by students contain information about the effects of internal student enrollment patterns. While students' selection of institution represents another important kind of information that can affect an institution, this was not discussed in detail in this study because of the different external variables involved in such a consideration. For instance, students could decide to attend an institution based on such things as proximity to their home of record, or on costs of tuition and fees, or on total institutional emphasis (e.g., is the college an agricultural school, a liberal arts college, or a technological institute?). These kinds of things will vary from
one institution to the next and will mean different things to different students. These things could also appear as factors of external competition between institutions. In contrast, this study examined attributes of internal university organization to discover whether faculty perceived studentss pursuits to be an influential consideration when making changes in a particular curriculum. Thus, the focus of this study remained internal rather than external.

Finally, since this study explores whether the information provided by students influenced professionals as they made regular adjustments in a relatively stable curriculum, the primary consideration is the information feedback processes among organizational participants.\(^1\)\(^2\)\(^3\)\(^4\)\(^5\)\(^6\)\(^7\)\(^8\)\(^9\)\(^10\)\(^11\)\(^12\)\(^13\) Incoming information, in this context, refers to kinds of knowledge that people have, from specific items about either student demand or the curriculum (e.g., twenty-five students are enrolled in Biology 101 or six hundred students are in introductory English) to general accounts of trends related to these two things (e.g., a great many students are taking business courses). Since participating groups in colleges and universities are constantly interacting, remaining generally informed about what organizational participants are doing is assumed to be essential to getting the work done. Receiving such information is known as feedback and institutional participants vary in the ways they measure, interpret, and use the messages that affect aspects of what they do.\(^1\)\(^2\)\(^3\) For example, upon hearing that more and more students are electing to pursue a business major, one academic department might decide to offer courses that relate more directly to business concerns. Another
academic department might decide to do the reverse, stressing in their course offerings the differences between business concerns and traditional disciplinary concerns. Yet another department, as a result of the same knowledge about increasing numbers of business majors, may change nothing in their curriculum. Each department may be viewed as having attended to the information differently. The primary concern of this study, then, is an examination of a feedback process to discover whether faculty attended to what students took when deciding to change an undergraduate curriculum.

Organization of the Study. Chapter II will delineate the organizational literature on change that guided this study. A discussion of organizational responsiveness to changing environmental variables follows, with specific reference to responsiveness and information feedback in a college or university. Relatedly, what students were doing during the decade of the seventies will be discussed to illuminate general trends in student enrollments as well as how trends in student participation were viewed in the literature. In Chapter III, the design and methodology are presented and limitations of the study outlined. Chapter IV describes the population and sample and covers the findings of the study. Chapter V includes the conclusions of the research and suggestions for further study.
Notes: Chapter I

1 The Carnegie Foundation for the Advancement of Teaching, Missions of the College Curriculum: A Contemporary Review with Suggestions (San Francisco: Jossey-Bass, 1977), p. 18. Frederick Rudolph, Curriculum (San Francisco: Jossey-Bass, 1977), Chapter 1. Rudolph's work gives one a perspective of the evolving nature of curricular change in the United States. From the colonial college era to later times when land grant and research universities began to emerge to the age of community colleges, Rudolph notes curricular shifts which accompany each age. The trend toward increasing specialization and compartmentalization, the blending and reconciling of older curricular forms with newer ones are described in Curriculum. In contrast, Missions deals more with the current state of curricula, showing that forms exist and suggesting possible directions in evolving curricular design given current conditions.


4 See Frederick Rudolph, The American College and University (New York: Random House, 1965 and Curriculum (San Francisco: Jossey-Bass, 1977) on the effects of student activities in the extracurriculum. See also Arthur Levine and John Weingart, Reform of Undergraduate Education (San Francisco: Jossey-Bass, 1974) for discussion on how faculty picked up the "relevance" theme of student activists, often without the same degree of interest from the general student population.

5 Altbach, p. 230-231.


8 Fox, Pate, and Pondy, p. 54.


13 Katz, Kahn, and Adams, p. 299.
Chapter Two
Theoretical Framework

Changing the curriculum is one way that members of a college community can respond to variations in the environment. If students, for instance, subscribed more heavily for a period of time to basic science courses than to courses in the arts and humanities, members of the various departments might respond by changing parts of the curriculum. Do members of academic departments respond to fluctuations in student enrollment patterns? What is the influence of trends in students' academic pursuits on the concomitant adjustments that departments make in their curricula? By examining the literature on adaptive organizations, one may begin to address this question. In the research on organizations, a college or university also can represent one kind of adaptive organization, shaped by elements common to other complex organizations. In this view, colleges and universities may respond to environmental change in ways similar to business firms or public bureaucracies.

In the higher education literature, decreasing numbers of traditional students, dwindling resources, increasing costs, and spiraling inflation were cited as important environmental considerations for an American college during the seventies. At the same time, student interests shifted as they pursued courses of study in preparation for meeting many of these same environmental considerations as working adults. Preparing, for example, for careers in either medicine, business, law, or industry, American students of
the seventies tended to concentrate their undergraduate efforts more in professional and vocational areas, less in the social sciences, and still less in the arts and humanities. That pattern, of course, varied from one institution to another depending on any special characteristics or emphases of an institution. Nevertheless, the prevailing national trend in students' academic pursuits tilted toward potential professional or vocational areas.

The administrative problems of dealing with decreasing traditional student numbers, increasing costs, and inflation received considerable attention in the literature during this period. At the same time, others addressed the difficulties of convincing people to change a curriculum, even when the context of the times--economic, political, or social--suggested the need for better coordination and planned change. The curriculum seemed to be more the prerogative of individual faculty members or collective faculty groups than a responsibility assumed and thus managed by administrators. In accord with this idea, Manns and March further noted that it was not clear that faculty would respond to adverse environmental changes by changing curricula:

It is not clear that faculty . . . can, or will, respond to . . . adversity. The ways students move through college and receive degrees, the nature of their instruction, the options they have, the credits they accrue, the grades they receive, the accessibility of faculty and courses are central to the university and seem resistant to coordinated change.

A Broad Perspective of Organizational Response Behavior: Bounded Rationality. To explain of such behaviors, some organizational
theorists approached the ways in which colleges and the people in them act by first assuming that people have some limitations of comprehension when they try to make meaning of events in their world. This research perspective suggests that human knowledge is not perfect. Despite an abundance of information, people rarely have all the information they desire to make a decision. At the same time, people can only selectively attend to the information they do have, so great is the amount of readily available information. In this view articulated as early as 1958 by March and Simon, people make decisions with bounded rationality. Bounded rationality occurs as a result of people having to make decisions with incomplete information as well as limited time and capabilities for processing information. More to the point of this study, as faculty make curriculum change decisions they do so with incomplete information as well as personal limitations in dealing with the information. The basic premises used in this research vein represent well-known theoretical ideas. These premises are embodied in March and Simon's conceptual use of the terms "organizational search," "organizational slack," "bounded rationality," and "aspiration level goals."

Simply stated, organizational participants are assumed to hold various aspiration level goals as they make decisions, which they also use to evaluate performance. (For instance, a college community may have such goals as having a certain percentage of Ph. D.'s on the faculty or having a certain percentage of entering students with combined SAT scores of 1200. Or they may have goals of realizing a certain level of funded research from private foundations). Members
of the organization will search for new options and new information, when goal achievement does not occur. Organizational search goes on until alternatives surface that satisfy recognized goals. In addition, old alternatives serve as likely places for seeking out new alternatives. People will tend to look first among familiar sources when seeking new alternatives, since their time for searching and capabilities for processing the many and varied kinds of existing information are limited. Such limited rationality theories basically describe the ways people allocate their attention. Moreover, people seem routinely to attend to some things and not to others as a matter of course. In contrast, periods of organizational slack represent times when people are achieving aspiration level goals. Slack times are good times. People reduce or relax their search for new options while organizational slack is accumulating and aspirations are rising. But, should performance fall below aspiration levels, people will begin to search again, slack will decrease, aspirations will wane.  

Fluctuations in aspiration levels, organizational search, and slack tend to keep performance and goal levels reasonably close together. In turn, relatively large variations in external environment translate into relatively small variations in what people perceive as successful. One can expect reduced conflict among people in the various parts of an organization when slack exists: internal competition wanes as external resources, opportunities, and aspirations rise. Conversely, internal competition increases as resources, slack, and aspirations decrease.  

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Just as people in adaptive organizations seem to respond to environmental change in certain ways, so also might people adjust a curriculum in response to environmental variations. Regarding a college curriculum, the theory suggests that in times of plenty (when such goals as sufficient qualified students, sufficient resources, sufficient qualified colleagues, sufficient time for teaching and research and the like are being met), organizational participants will be more relaxed about seeking alternatives to present conditions. In such times, academics will be less likely to change curricula while conditions are good and aspirations continue to rise. In contrast, should these same people begin not to realize certain goals (e.g., the number of qualified students falls off, resources dry up, attracting qualified colleagues becomes difficult), then they will search for alternatives to these conditions. The theory suggests that during such times, academics are more likely to change curricula as a part of their search for new options.

Further, internal competition between departments (as they maintain their respective curricula) will not be as evident during good times and curriculum change will occur less. But, competition between departments will visibly increase as conditions worsen. In turn, departments are likely to adjust their curricula to remain flexible and competitive.

In support of this idea, two studies have shown that when confronting adverse conditions, people in organizations do search for alternatives. In one of these studies, Curtis L. Manns and James G. March found that members of academic departments changed curricula
under conditions of adversity, but that departments with stronger reputations showed less of a response than did those with weaker ones. Even so, Manns and March could not exclusively associate curriculum change with the problem-oriented search implicit in the basic theory. Several other interpretations—organizational complexities or complications in human events—could have contributed to the witnessed curricular changes.

These alternative interpretations fall into four categories. First, solutions may have driven the search process rather than problems; that is, decision makers may have had a solution that they wanted to attach to an issue rather than the reverse. For example, a faculty may have wanted to add an innovative academic program and could not do so without having a problem, which needed solving, as a rationale for the innovation. So, the faculty may have found a problem to attach to their innovative solution. Second, a phenomenon known as risk satisficing may have influenced change (e.g., a faculty could have made decisions to maximize chances of reaching aspiration levels rather than to maximize chances of receiving expected rewards). Third, even though people may tend to avoid taking risks during good (slack) times, having a decentralized organization increases the significance of the slack search that does occur. In colleges, the professional preferences of experts in the various subject fields and the meanderings of loosely controlled departments during good times may have increased the level of risk taken. For example, curriculum changes, which occurred as a result of thoughtful experimentation in good times, may prove to be more significant than those resulting from
a search for alternatives to undesirable conditions. Fourth, a shallow reserve of ideas may be left after long periods of adversity. In other words, having tried several options during an adverse period, it may be increasingly difficult to find viable alternatives that people have the time, resources, or energy to implement. Such depletions can leave an organization and its participants vulnerable.12

Ambiguity in Academic Organizations: Some Visible Response Behaviors. In light of such considerations, the ways in which members of an academic organization behave in relation to a changing environment becomes more difficult to sort out according to a broad behavioral view. For example, a changing external environment (e.g., inflation, fuel gluts or shortages, shifting demographics) can seem different and somewhat separated from a changing internal environment (e.g., increased centralization, increased disciplinary focus, more prescribed curricula, increased competition for resources among departments) in a given period at a given institution. Just which parts of the environment, external or internal, that a faculty may have considered when making decisions is not immediately clear. To address this difficulty, Michael D. Cohen and James G. March emphasized these organizational complications—complex and ambiguous though they seemed.13 Cohen and March suggested that although colleges and universities show strong evidence of the coherence and coordination that classic treatments of organizations depict, they also exhibit strong evidence of the reverse: unclear, changing, and conflicting goals appear to exist. Behaviors in one part of a college
may seem only loosely connected to those in another part. The links between solutions and problems seem equally loose or even spurious. The technology of academic institutions also lacks clarity, consistency, and direction. Operating by trial and error procedures, policies sometimes are implemented, sometimes not. Members amble in and out of decision arenas, each contributing personal time and effort variously. Cohen, March, and Olsen further described the academy as functioning more like an organized anarchy. The results of academics' behavior were not readily anticipated before hand. In contrast, those same results became obvious and reassuring after the fact.

When changing a curriculum, members of an organized anarchy would not always behave in a predictable or rational manner. For instance, curriculum change rationales or solutions may be vaguely stated, loosely connected to actual departmental problems, or even inconsistent with established educational policy. The number and interests of those who participate in making curricular changes may also vary over time. When decisions to change are made, the direction of curricular change may be clearer after the change has been in place than it was at the time of the change. When changes do ultimately result in desirable directions, the rationales given for the change may normatively reassure the decision makers and reinforce them in their resolve to pursue a certain course.

In later work, March suggests that "processes of rationality might combine with properties of human beings to produce decisions that are less sensible than the unsystematized actions of an
intelligent person, or at least that the way in which we might use rational procedures intelligently is not evident. [Furthermore] . . . our ideas . . . might be improved by greater attention to our descriptions of choice behavior." While a rationally organized and operated college may exist as a desire, the ways that participants in academe regularly behave may serve to temper what actually happens. Hence, other complications of organizational activities and behaviors may reside in the aspiration levels of participants (both short- and long-term), degree of goal clarity (either existing or desired), level of experimentation with different values or beliefs (as a result of individual preferences or of an institutional climate), and the mix of intuition, learned behavior, and calculated rationality present in one or many decisions. In turn, the reasons why academics change curricula remain difficult to sort out.

**Channeling Ambiguous Behaviors: Rules, Routines, Traditions.**

What is the order of things, then, if a college does show evidence of this varying mix of influences as community members adjust to environmental variations? More specifically, what kinds of things could influence the ways in which members of a college community will attend to information or events? Critiquing notions of organized anarchy as organizational theory, Perrow asserted that the relative lack of emphasis on the stable, routine, or channeling effects of rules on behavior is a difficulty of this organizational perspective. This lack of emphasis encourages one to think that Cohen and March's garbage can paradigm applies just to unorthodox, loosely connected organizations. In contrast, part of the stability, routine, and
channeled effects for a college may be found in a highly salient, ambiguous understanding of the purposes and processes of higher education. While familiar forms exist in higher education—hierarchies, differentiation, standard operating procedures—so also does a highly salient ambiguity over the processes of deciding what to do, how to do it, and who will do the work of a college.\(^{17}\)

Indeed, the traditional structures in higher education may be consciously and unconsciously maintained in ways that encourage ambiguity, when a need for being unclear serves either an individual, a department, or the institution well. Such traditional things as credits, degrees, courses, majors, and the like may also provide ready forms inside of which ambiguity can exist. For example, a course title and description may stay the same, while the substance of the course changes (due to changing texts, new research, changing teaching emphases, and the like). Thus, certain forms may stay the same in higher education as the environment varies, while what people do with the forms may emerge from varying ambiguous processes. Furthermore, even as some of these channeling effects are explicit, some of the influences on these channeling effects are more implicitly realized.

What then are some of the implicit or explicit influences on academe's ambiguous decision processes? Using ambiguity as a salient theme in higher education, Cohen and March proposed that changing enrollment markets are linked to a changing environment. As such, one means of adapting to a changing environment lies in making curriculum adjustments according to variations in enrollment markets.\(^{18}\) Thus,
enrollment markets could be said to have an influence on curriculum change decisions. Manns and March extended the same idea:

The university (and departments within it) must maintain demand for enrollment in order to secure resources to meet the demand. The mechanism sometimes operates directly through student changes, sometimes indirectly through taxes and legislative subsidies.19

One way to realize such an adjustment is to change curricula in response to what students are doing. Internally, this means that competition for resources through the enrollment market can encourage curriculum competition among departments.20 This competition can take the form of departmental attempts to make their curriculum more attractive, flexible, or accessible to students.

Salancik and Pfeffer noted, however, that such internal competition depends in large part on how vulnerable a department views itself to be. Salancik and Pfeffer suggested that a department will more likely seek to have an attractive curriculum when times are bad and internal competition is keen. But, Salancik and Pfeffer also observed that those departments which were able to use a strong reputation to secure either external funding, student interest, or administrative support would be less dependent on having an attractive curriculum as a means of competing for scarce resources.21 In turn, reputation could serve as a point of ambiguity since it represents an institutional characteristic that is more implicitly than explicitly defined.22

Moreover, if a good reputation is an indicator of success for an institution or departments within an institution, then some in an academic community might not be inclined to risk untried
innovations. Indeed, reliability and predictability may form part of the foundation of a department's or an institution's reputation. Perhaps that is one reason why changing distinctive programs has been compared to moving a graveyard: both are difficult undertakings. Radical change in the basic form of distinctive programs occurs sparingly, it seems, as institutional participants selectively attend to various aspects within their respective programs.

As noted earlier, Manns and March found evidence in support of the idea that departments will change their curricula to make them more attractive when internal competition is keen, with strong departments changing less than weaker ones. But Manns and March also noted the subtlety of the changes as well as the academic traditions which may have been involved in the changes. While mentioning departmental reputation as a consideration, Manns and March further suggested that "[t]he curriculum and the various practices that it summarizes are also symbols of different importance in different departments, protected with varying degrees of internal cohesiveness." For example, a numbering system may have more symbolic significance to a department where course number is an indication of course difficulty than it would in a department where numbering is more arbitrary.

If reputation or academic tradition represents one caveat to Manns and March's perspective and findings, and if the changes they found were subtle and may represent varying levels of symbolic significance, then the following could be an appropriate next question: what other kinds of things inform academics' decisions to
change? While Manns and March suggest that other interpretations of their findings may exist, they nevertheless concluded that it was possible to look at the archival data they had collected and analyzed and find support for their aforementioned perspective. In doing so, however, the reasons for the changes that might have been given by these people who had made the changes remained unheard. Aspects of internal organizational perspective do not receive close scrutiny. In an organization where reputation, academic tradition, and symbolized meaning have been cited as influences the change process, it becomes all the more important to know what kinds of things did inform the academics' decisions to make changes (however subtle), in order to describe more fully the organizational context of change. To extend Manns and March's work in such a manner requires an examination of an information feedback process to discover what has influenced academics' decisions to change. Such an inquiry would at once address these academics' reasons for change as well as the meanings or importance associated with the curriculum symbols to which Manns and March referred. Examining such an information feedback process was the aim of this research.

By focusing on student enrollments, this research did not seek to examine Manns and March's full theoretical perspective. Manns and March's work involved looking at economic adversity as it relates to enrollment markets as the markets, in turn, influence adaptive curriculum change. This study expands upon Manns and March's work through a selective focus on those portions of their perspective which related more to internal events—student enrollments and routine
curriculum changes. Such a refinement of research focus allowed for closer exploration of a particular portion of the adaptive phenomenon which had been proposed to exist. While not testing the full Manns-March perspective (and thus exploring the links between economic adversity, enrollment markets, and adaptive change), the study concentrated on gaining greater insight into particular internal characteristics of that phenomenon. Specifically, this study focused on faculty perceptions of what contributed to their decisions to make curriculum changes. Further, this study sought to discover whether faculty perceived student demand to have influenced their routine curriculum change decisions. Examining the perceptions of those who had made routine curriculum change decisions expanded researched knowledge on two fronts: 1) knowledge of where faculty perceived their attention to have been (e.g., what reasons did faculty give for making the particular changes examined); and 2) knowledge of the meanings that faculty associated with particular changes they had made (e.g., what kinds of definitions and importance did faculty attribute to the six curriculum changes examined).

Channeling Information: A Feedback Process. In exchanging information in a college or university, the members of institutions use their own language to describe the various academic programs and the curriculum. For example, the required courses which all undergraduates must take may be called distribution courses in one college and general education requirements in another. Both probably refer to the breadth component of an undergraduate curriculum. The people in each institution used a term to describe all courses that
fall into the category of fulfilling breadth requirements. In turn, one can speculate that the term used closely approximates what academics think that category of courses represents. One can also speculate that with such broadly defined categories as these, that discrete understandings of course relevance to the category and to other courses in the category will vary from one person to the next. Such categories provide useful, general channels for curricular information. The ways that people make meaning of information pertinent to the operations of a formal curriculum depends on such coding categories--categories that are set up for assimilating information. "The nature of the system imposes omission, selection, refinement, elaboration, distortion upon the incoming communications." The classification system of a curriculum sets up a structure that allows people to exchange information representing a rich complex of actual meaning using fewer symbols than would otherwise be necessary. The classification system may also be viewed as the forms of a curriculum (e.g., titles, numbers, descriptions, courses notations, degree requirements).

The shared language in a formal curriculum makes communication easier among faculty, students, and administration due generally to broad conceptualization of information categories. Information that does not blend readily in acknowledged conceptual arrangements, however, will confront difficulties of communication and problems of fit. There are also areas of information that by inference have program relevance. Areas of inferred meanings represent areas interpreted variously by members of the academic community and can be
areas of ambiguity for those organizing or operating a curriculum.

Inferring meaning from highly diverse kinds of evidence remains central to colleges and universities. The physicist infers from calculations that a star is six million years old. The philosopher infers from Plato's works that people may be describing their own shadows on a dimly lit cave wall rather than any actual sight. The faculty may also infer from the physicists and the philosopher's work that each approach represents a view of the world. A faculty may further infer whether certain physics courses and philosophy courses belong in the same curriculum. The curriculum, therefore, must also somehow allow for communication of inference among members of the academic community as they organize themselves and as they represent their work, the work of a subject area, or the transmission of knowledge to students from one subject area to another. Where people do communicate inference for use by organizational members rather than hard evidence, "uncertainty absorption" takes place according to March and Simon. For example, uncertainty absorption takes place when people infer meaning from statistics that resulted from a survey, like a Gallup Poll, since people make assumptions about what the statistics mean. Uncertainty absorption also takes place when a faculty assumes from a new course proposal in a specialized area what the fit of that course will be in the departmental or school curriculum.

In a college, by virtue of the specialization involved in the various disciplines as well as in the administrative support services, much information enters the organization at highly specific points. For instance, direct perception of admission processes is limited
mainly to those working in admissions. Direct perception of student attitudes is limited largely to those who deal with students. Direct evidence of instructional needs in a subject area—like requiring a prerequisite course of students, adding a new course to the curriculum to keep abreast of current knowledge, or changing credit requirements for majors—is restricted mainly to those working in the area. The experts are assumed to have the pertinent information.

[1] The person who summarizes and assesses his own direct perceptions and transmits them to the rest of the organization becomes an important source of informational action. The "facts" he [or she] communicates can be disbelieved, but they can only rarely be checked. Hence, by the very nature and limits of the communication system, a great deal of discretion and influence is exercised by those who are in direct contact with some part of the "reality" that is of concern to the organization.29

Even regular changes in an academic program, the normal drift of a curriculum, remain subject to inference. Changing course numbers, titles or descriptions, adding, deleting, or modifying courses, adding or subtracting credit requirements for majors, adding or subtracting prerequisite requirements for a course—all of these alterations, additions, or deletions are usually made by faculty in their respective departments or schools. Further, while some people may make these kinds of changes based on evidence, others may decide to change based on inferred meanings, and still others may use both. The information that people do use depends, in part, on what information is available to them and how they attend to the information, if at all. Feedback to those making decisions about a curriculum, for example, can include information about increased or decreased student enrollments, educational performance of students, and increasing or
decreasing faculty participation. Feedback can also have no relationship between an act and curriculum change.

Allocating Attention. Understanding how people deal with the feedback and, in turn, make regular changes in a curriculum requires an appreciation of how that process fits into the lives of those who make the changes. Faculty and students are at once involved in many things. "Individuals attend to some things, thus do not attend to others. The attention devoted to a particular decision by a particular potential participant depends not only on the attributes of the decision, but also on alternative claims on attention." The same event—such as a change in prerequisite requirements for students—attract little notice or much depending on the context of claims, personal and organizational claims on people's attention at a given time.

Chris Argyris argues that participants in organizations are encouraged to change (e.g., learning or change behavior is defined as detecting and correcting errors or mismatches) as long as the changing does not undercut the fundamental design, goals, and activities of their organizations. This is called "single-loop learning behavior." In "double loop learning behavior," a participant would be able to ask about changing fundamental aspects—like rules, goals, routines—of an organization. Argyris also suggests that the pervasiveness of single-loop behavior in individuals, groups, and organizations results in processes that limit exploration and information as people follow familiar rules, routines, goals, and the like. While providing stability, the phenomenon inhibits fundamental change. Argyris also
suggests that individual, group, and organization level adjustment activities, rules, and routines exist in such a way that they are mutually reinforcing.

Where people make regular changes in a curriculum, their observed behavior often reflects established procedures. An implicit agreement is involved in which, to a certain extent, people act in a certain way in return for receiving certain things. The rules followed, in this context, refer more to how people comprehend things about themselves and their organization than to any explicit contract. A distinctive college curriculum, for example, can function with reasonable reliability and consistency, having established rules, routines, or procedures that people can and will follow even if their own preferences or beliefs do not always coincide. By the same token, these same rules represent useful devices for changing in response to environmental variation: they provide a kind of stable tradition or from in which change can occur. "Moreover, organizations adapt to their environments by changing rules, though the processes of such change are slower than routine adaptation to changing conditions within rules." 33

If a distinctive college has a relatively stable curriculum that people routinely adapt as conditions change, the response nevertheless takes place in a complex, often confusing world. James March notes that even routine changes can be influenced by the following: 1) superstitious learning behavior (e.g., people observing traditional rituals to produce traditionally valued outcomes because some part of the rite has resulted in the outcome in the past, though no one is
certain what part it is); 2) more emphasis on changing the accounts of performance than on changing performance; 3) overspecialization in successful organizational areas (to the neglect of areas of less competence), or 4) short-term response to client demand to the detriment of long-term quality considerations. Therefore, even routine curriculum changes may result in some unexpected effects since faculty may be making decisions based on any of the above perspectives.

Faculty members will often gather information to aid in making decisions. When people do gather information in an effort to sort out complexities or to clarify confusing messages, the connection between the information and the decisions often remains tenuous. The literature is full of examples of weak information/decision links. One can make seven observations about the ways people gather and use information as depicted in the literature:

1) Although people gather and use a great deal of information in organizations, much of it has scant decision relevance.

2) People collect much of the information for justification and interpretation after a decision has been made or almost made.

3) When people request the gathering of information, much of it is not used in making the decision for which it was requested.

4) People often request more information, regardless of how much they had at first consideration of a decision.

5) People ignore available information, even as they request more.

6) People are more conspicuous in their insistence on information than on the relevance of information gathered for a decision process.
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6) People are more conspicuous in their insistence on information than on the relevance of information gathered for a decision process.
7) People frequently cite information inadequacies as a complication or qualification of a decision process.35

These observations, moreover, do not necessarily imply that organizational participants lack intelligence. Single-loop learning behavior (that is by definition imitative and rule-following) or selective attention tends to obscure intelligence. Moreover, Feldman and March have suggested that organizational incentives exist for conspicuous over-consumption of information— incentives that are buried in an organization’s rules. Also, people gather and use much information to scan the environment for surprises resulting from routine procedures as much as to clarify uncertainties.36 Strategically misrepresented information exists as yet another problem of gathering and using available information. Finally, information use affirms the social value of rational choices, symbolizing a commitment to rationality, and signaling personal and organizational competence.37 Feldman and March conclude that this kind of information gathering and use behavior should be more common where decision criteria are ambiguous, performance measures are vague, where no quick feedback exists concerning decision quality, where decision success depends on other unpredictable or uncontrollable decisions, where other legitimating traditions are not important, and where people associate rational ideologies with the work they perform. March and his several colleagues in this research vein indicate that these are characteristics of colleges and the processes academics use in making decisions.

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Earlier studies of organizations foreshadowed these more recent analyses. In a test of the March-Simon hypothesis concerning the relationship between organizational complexity, formalization, and task communication, Hage, Aiken, and Marrett ultimately argue that as personal specialization increases organizations diversify and become differentiated. Further, those organizations with nonroutine technology will be more likely to achieve coordination through feedback or mutual adjustment. These organizations will also have a greater volume of communication. In another study oriented toward organizational constraints to communication, Bacharach and Aiken noted a level-specificity to organization communication: they inferred from their findings that while structural determinants influence subordinate communication, department head communication may be more susceptible to psychological influences. In the latter study, Bacharach and Aiken suggested that what department heads perceived about themselves and the setting or context may have influenced communication. In the former, feedback (a process subject to the channeling effects of rules or routines) represent an organizational adjustment mechanism.

Members of an academic organization try to understand what is going on, to interpret what is going on, and to help each other with beliefs about things unknown. In this view, when people decide to make changes, it can represent a symbolic action arena for developing and enjoying an interpretation of life and one's position in it. Colleges do have distinctive traditions regarding their academic programs. These traditions enable organizational participants to tie
routine events to beliefs about the nature of things. In this view, comprehending a college and its curriculum, involves recognizing that curricular or educational outcomes may have less importance than the processes people used to provide meaning in an ambiguous world. For example, a degree, itself, may not be as important as the processes in which people were engaged to acquire the degree, and the meaning people associated with the processes. Further, "[t]he meanings involved may be as grand as the central ideology of a society committed to reason and participation. They may be as local as the ego needs of individuals or groups within the organization."  

Individual and collective beliefs about the nature of things represent, then, an important information consideration. Sproull, Weiner, and Wolf documented the history of the National Institute of Education, viewing the evolution of the organization to be the result of actions, external events, and beliefs. Describing actions and external events that had shaped the history of NIE represented a more concrete task than did that of discussing people's beliefs about events. They found that people's beliefs about what had happened at NIE "... had been shaped by differential exposure to actions and events, differential exposure to those individuals who ... [promulgated] ... interpretations of the institute's current and recent experience, and each individual's normative vision of what should have happened." In the developing history of the NIE, as people's beliefs about the organization changed, so did their expectations regarding future events, and their behavior in succeeding actions changed. In short, belief, interpretation, and behavior
seemed inextricably linked in temporal and contextual proximity to emerging events.

**Contemporary Contexts: Educational Policy Considerations.** If faculty members indeed have beliefs and interpretations of the curricula with which they work, so also do they appear to work persistently with a set of rules that describe what an undergraduate program is. Indeed, histories of higher education depict faculty as perpetually concerned with questions of satisfying the claims of liberal or general education. These histories also describe the varied approaches to these questions from one institution to another and from one person to another. Recent perspectives also record fewer convictions among faculty or administration about "what is right and proper, about what they will and will not do." Regardless of the philosophical approach or degree of firmly held philosophy regarding these questions, however, some mundane considerations also compete for faculty attention, which in turn can influence the outcome of academic policy deliberations:

1) The willingness of students to be coerced into taking courses they would not choose to take independent of the requirement.

2) The enrollment cycles of various departments ... a major factor in resource allocation.

3) The desire to have small classes. To have many small classes, the college or university must ordinarily have some large classes that can be taught using modest faculty resources.

Although these are three legitimate considerations, Cohen and March point out that educational policy discussions frequently are
couchèd in terms of the educational needs of students, without clear distinctions made between educational ideals and necessity. For example, faculty may decide that knowledge of the fine arts is an educational need or ideal for students. But students may not freely sign up for fine arts. Attending to how many students sign up for a class remains an organizational necessity, which Cohen and March say, often is spoken of in terms of the ideal, especially when giving rationales for decisions made. Whether the faculty makes fine arts a requirement or drops it from the curriculum, the rationale for action is likely to be stated in terms of an educational ideal (rather than in terms of the absence of students). Information on organizational necessities—like enrollment patterns, resource allocation, and class sizes—can have considerable impact on existing educational policy. In addition, faculty tend to deal with educational policy considerations—mundane or ideal—from the vantage of their respective departments.

Other scholars like Laurence Veysey, Martin Trow, and David Riesman have stressed the stability of the department as the basic structural unit of a college. Distinctive, highly selective institutions, moreover, have an overabundance of applicants even as they (with curriculum-wide and with departmental academic regimens) exact demanding requirements of their students. As mentioned earlier, reputation, routine, rules, and a highly stable departmental structure remain at the center of the phenomenon. Student demands for particular courses or subject areas are not usually met with spontaneous additions in distinctive academic programs. By the same
token, only at an especially well endowed institution could traditional or esoteric subjects find unwavering protection in the face of persistent underenrollment. Students and faculty within an institution apparently combine in forming any relationship between student demand and institutional response. Moreover, the nature of that relationship may differ from one type of institution to another.

Students in Context. To examine this possibility, one may begin with a look at the general student context and work from there to a more specific student context of an institution. What then did students do nationally in the seventies? Arthur Levine characterizes the decade as having greater numbers of students, greater mixtures of different kinds of students, and more career-oriented, practical, concerned with self and material success types of students. Levine's characterization corresponds to others. For the seventies, the Carnegie Council chronicled increasing enrollments (up 24.3% nationally) at most institutions, with public institutions assuming larger and larger roles. Nationally, there were also more women, more Blacks, more Hispanics, more part-time students, more high school students taking college level work, more older students, and more foreign students. Further in contrast to the students of the sixties, these students were described as more professionally or vocationally oriented, less politically active (in regard to global social issues), less interested in academic reform, less respectful of rules and regulations, less hopeful about the world, but more confident of their own futures. Among "new students" in the seventies, other descriptors emerged as a result of varying academic, social, economic,
familiar, and general experiential backgrounds. Women, older students, Blacks, Hispanics (those groups of people who had traditionally been under-represented in American higher education) brought diversity and differing levels of traditional skill attainment with them as they matriculated. These students tended to go to larger, public institutions and to the community colleges where tuition and subject orientation were attractive.

Heading the list of reasons given by freshmen of the seventies for attending college was to get a better job, notes Levine. Further, one out of every seven students was completing the requirements for two majors. In a national atmosphere of unchecked inflation, oil crises, intermittent unemployment crises, and recession, students associated the keen competition among majors for grades and other academic rewards with keen competition for jobs. Taking two majors represented an elaboration of students' concerns with their own future employability. Thus, undergraduate students naturally spread their enrollments approximately as follows: professional schools, 58%; social sciences, 8%; humanities, 5%; sciences, 15%; arts, 6%; other or no major, 8%. Enrollment growth surfaced in the professional areas and in the biological sciences (within the sciences). Furthermore, students were using substantial portions of their elective options to intensify specializations beyond what was officially required.

The students of the seventies had more political clout than their predecessors because they could vote. On campus, the concept of in loco parentis was largely moribund, also adding to students potential ability to participate more freely. Many have noted, however, that
"me-ism," consumer satisfaction, and loss of idealism surfaced as influential student themes—influences that tended to separate students politically.\(^5^9\) Whereas, seventies students held more positions on college and university committees than their predecessors, they seemed more willing to accept a somewhat smaller role in regulating degree requirements, course content, dormitory rules, and student discipline.\(^6^0\) Thus, the literature portrays students as somewhat passive in relation to curricular matters. Levine further argues that students received positions on committees at a time when committee clout was decreasing due to such influences as state coordinating boards and collective bargaining.

In the higher education literature, students as consumers show up frequently as a 1970s theme. If students were less active in regulating their own academic programs, they nevertheless instigated litigation or threats of lawsuits against academic institutions.\(^6^1\) Some students held expectations of their institutions regarding truth in advertising, and responsibility for delivery of promised product.\(^6^2\) Students seemed to want to be able to secure clear credentials in the face of a competitive job market; and their complaints against colleges and universities may have been a reflection of this.

Some of the researchers inferred that curricular change in the seventies reflected a consumer orientation. Institutions were competing to attract students. Many faculty and administrators held fewer convictions about what an educational program ought to be. In turn, some curricula seemed more responsive to social demand than others.\(^6^3\) There were exceptions to this responsive trend. The
exceptions seemed to occur most notably in very selective colleges and universities whose relatively stable, distinctive programs remained constantly over-subscribed. While highly selective institutions seemed less susceptible to the aforementioned trend, nevertheless, some curriculum changes were recorded amid active debate among faculty, administration, students, and external groups. In short, few institutions, if any, appeared to be completely insulated from economic, political, or social considerations of the decade. In turn, while student passivity and consumerism may have surfaced as prevalent themes, the themes did not necessarily influence every area of academic organization. Each institution with its respective participants seemed to negotiate the events of the decade in ways that were at once particular to academe, to the institution, and to the participants.

Finally, the studies that described students' trends in enrollment and participation within the university in the seventies were primarily just that—studies of students' endeavors and attitudes. Studies of curriculum change or curriculum reviews at various institutions in the seventies also looked primarily at curriculum trends. The question of whether or not the trends in students' pursuits and in curriculum change bore a relationship to each other remained virtually unexamined in the literature. Did trends in students' pursuits represent an area of information that influenced the faculty as they made curricular adjustments? The literature suggests that change results from people selectively attending to the information which is available at a given time and
place. Allocating attention is a part of an information feedback process in people and the colleges and universities in which they function. The process in academe also remains subject to the channeling effects of such implicit and explicit things as rules, routines, tradition, and reputation.

Students form a part of the academic context. Amid the rules, routines, and traditions of colleges and universities, students take courses and pursue majors offered by the faculty. Do faculty attend to trends in students' pursuits? In an attempt to examine this question, this research focused on an information feedback process to discover what kinds of things influenced the faculty as they made regular changes in the curriculum. In this way, the study sought to discover whether faculty perceived students' pursuits as an influence on curriculum change decisions.
Notes: Chapter 2


March and Simon, Organizations.


Manns and March, "Financial Adversity, Internal Competition, and Curriculum Change in a University."

James G. March, "Emerging Developments in the Study of Organizations," The Review of Higher Education, 6 (1982), pp. 3-4. See also Mayhew, "Surviving the Eighties as Mayhew concurs with March's qualifications: when facing bad times, people in organizations will try riskier and riskier strategies, increasing changes of short-term survival, but reducing life expectancy. According to Mayhew, choices that seek to reverse a decline may not maximize expected goals; and for the institution that did not survive, survival efforts will have helped the process of failure.

Cohen and March, Leadership and Ambiguity.


Cohen and March, Leadership and Ambiguity.

Manns and March, p. 542.

Manns and March, p. 542.


24 Manns and March, p. 551.


26 March and Simon, Organizations, p. 162.

27 March and Simon, Organizations, p. 164-166.

28 March and Simon, Organizations, pp. 164-166.

29 March and Simon, Organizations, p. 165.


Feldman and March, pp. 171-186.


See Carnegie Foundation for the Advancement of Teaching, Missions . . . for a discussion of trends in educational policy, Quotation, p. 5.

Cohen and March, p. 106.

Cohen and March, p. 107.


Verne A. Stadtman, Academic Adaptations (San Francisco: Jossey-Bass, 1980).


54. K. Patricia Cross, Beyond The Open Door (San Francisco: Jossey-Bass, 1971).


56. Levine, When Dreams and Heroes Died, pp. 61-66.


60. Levine, When Dreams and Heroes Died, p. 52.


63. Carnegie Foundation, Missions, p. 4-5.


Thus far the general suggestion has been that change emerges as people and events come together, since people selectively attend to events. The feedback processes people use to sift through all the incoming information embodied in events represents an important part of a change process. Moreover, a number of factors can affect the degree to which people will attend to the information, the degree to which people will tolerate ambiguity or seek clarity. Specifically, as faculty attend to information in ways that ultimately give shape, form, and substance to their respective curricula, students are at once partaking of curricular offerings. From the interaction of students taking courses and pursuing majors in a curriculum comes information about enrollments. How the professionals viewed or associated this information as they mixed with students in various settings provides further information for a feedback process. This study sought to examine an information feedback process to discover whether faculty attended to trends in students' pursuits as they made regular changes in a curriculum.

The investigator examined parts of the undergraduate curriculum of The College of William and Mary, a liberal arts institution. Because of its accessibility to study, and its relatively recent revisions of an undergraduate program that had been in effect for thirty-five years, William and Mary seemed an especially suitable setting for studying change in a relatively stable, organized
Research Questions. The central question of the research considered whether faculty perceived themselves to have been influenced by students taking certain courses and majors as they made changes in the undergraduate curriculum at William and Mary. Since a review of the literature disclosed that some academics have addressed the notion of student influence on curriculum change, this research sought to examine the validity as well as the underpinnings of this idea. To this end, the following specific questions guided the research:

1. Do faculty attend to students pursuits of certain majors when making changes in a curriculum?
2. Do faculty attend to the courses students are taking when making changes in a curriculum?

The remainder of this chapter includes details of the research design and methodology used, the site and selected sample examined, and of the tools developed and employed in data collection and analysis.

Design. A systematic, detailed assessment of a curriculum can well emerge from an extensive case analysis. When one seeks to gain greater familiarity with a phenomenon or setting (for later, more structured study, for clarifying concepts, or for providing some consensus regarding issues), flexible approaches to investigation are needed. Burton Clark, for example, found it necessary to use several sources of information (from existing records to interviews) in his two case analyses of a community college system and of three
distinctive liberal arts colleges. Because this research sought
greater familiarity with the relationship of student enrollments to
curriculum change, the strategies used here also included several
approaches to gathering information. Although existing records of the
College were used, the emphasis was on intensively studying selected
instances related to the research question. Therefore, interviews
were also conducted to probe more extensively the events under study.
The case analysis offered a particularly appropriate strategy for an
exploratory examination of enrollment and curriculum characteristics
as drawn from institutional records and interviews.

In addition, the case study permitted the use of appropriate
combinations of data-gathering techniques as well as intensive work
with selected sources. Extensive surveys, by comparison, would lean
heavily on the awareness and level of information of a relatively
large number of respondents to elicit accurate, general information.
Much of the detailed character of an organization may be only dimly
perceived by the typical participant, however; and the results of an
evolving curriculum may be somewhat removed from the view of the
many. In short, trends in the six curriculum variables examined in
this study may have been beyond the awareness of some organizational
participants. These same trends may be identified by a researcher
approaching the institution's curriculum with a particular
perspective. The aim of this research was to examine and chronicle
(using a particular theoretical framework) the trends in six
curriculum change variables at William and Mary during the decade of
the seventies.
In this particular study, the approach to examining curriculum change represents an attempt to extend the work of Curtis L. Manns and James G. March in their 1978 study of curriculum change at Stanford. Having examined financial adversity, internal competition, and curriculum change in the university, Manns and March concluded that adverse conditions had encouraged curriculum change. Further, some departments had changed more than others. Manns and March concluded that perhaps some departments had remained more insulated from the need to change (in response to adversity) than others by virtue of their academic strengths, secure position (financial and reputational), and the like.

This study sought to review change in variables similar to those that Manns and March had studied and, in addition, to ask those who had made the changes how the changes had come about. Manns and March had also suggested that curriculum change at Stanford, a highly selective, prestigious and private university, might look different from change at other American universities. At some public universities, for example, even if the university was selective or enjoyed a distinctive reputation, funding would remain closely allied to student enrollments because of state funding formulas. Therefore, this study focused on an examination of the trends in student enrollments during a certain period and the concurrent changes academics had made in the curriculum in a small, distinctive and selective public university, The College of William and Mary in Virginia. A case study, moreover, appeared as an appropriate medium for describing how the academics involved in the changes had viewed
the influence of their students' pursuits on decisions to make the six kinds of changes being examined.

An investigation such as this, an analysis of internal parts of an organization, incurs certain limitations. External influences—social, political, economic, environmental—are assumed to have an effect on the institution as well as the curriculum. Because the external context of the organization did not represent the primary consideration of the study, it was discussed but not analyzed in detail. The information resulting from the study retained further limitations beyond the situation studied, but still had general applicability. From the analysis of change in parts of a curriculum, curricular changes that appeared linked to what students were taking could be further studied to discover whether such influences were characteristic throughout the curriculum. Further, from the findings of such a case analysis could evolve other hypotheses to be tested in other contexts.

Selection and Description of Data. Several time frames were examined for their feasibility in eliciting adequate, appropriate data. Although the data on enrollments and course offerings could be observed at the beginning of each semester as students registered, one or two semesters of observation alone would not have been sufficient to elicit any particular patterns, relationships, or tendencies of a curriculum. A longer time frame was needed to elicit such a view. A longitudinal perspective of a functioning curriculum represented, then, an essential design element for the inquiry.
In this regard, the decade that included the academic years from 1971-72 to 1980-81 was chosen. The academic year, 1971-72, was the first year of operation for a newly revised undergraduate curriculum at The College of William and Mary, the previous curriculum having been in use for thirty-five years. Further, that same academic year marked the arrival of a college president who retained that position throughout the period. Factors related either to the development of the revised curriculum or to the arrival of a new chief academic officer were thus considered to be commonly felt throughout the institution, despite probable variation in response to these factors. Since the majority of William and Mary students complete a degree in eight semesters in residence, a ten year study allowed for the review of approximately seven generations of students partaking of available curricular offerings according to the tradition of the college. Thus, this decade appeared as an appropriate time frame in which to examine the events in question.

Two approaches to gathering student enrollment information were also considered. Within the basic requirements of a curriculum, each student selects an individual course of study. On the one hand, tracking what each student takes will show trends among student cohorts. On the other hand, total student enrollment in courses and degree completions in certain concentrations, when compared with the concurrent curricular adjustments over a decade will show trends in enrollment and in curriculum change that occurred in the same time frame. This study examined whether faculty perceived the trends in student enrollments to have influenced their own trends in making
curriculum changes. Therefore, information was collected on total student enrollment in courses and on degree completions in concentrations in order to have a factual representation of the student trends being examined.

These data could be collected, in part, from the records kept by the College Registrar. The number of students who had enrolled in courses could be obtained from course enrollment tallies. The number of students who had completed concentration requirements for a degree and in what area of study could be obtained from HEGIS Form 2300-2.1. For information on curriculum changes, the College catalog showed data reflecting numbers and kinds of courses offered, requirements for partaking of curricular offerings, requirements for departmental concentrations, requirements for degree completion, and changes or modifications in all of the above. The minutes and final reports of curriculum committees—particularly those of the Educational Policy Committee of the Arts and Sciences Faculty—also yielded data pertinent to the study. In short, a wealth of appropriate information was available for analysis.

Sample Selection and Description. How best to approach all of the recorded information? An in depth examination of only the aforementioned characteristics of the curricular system at William and Mary represented a study of immense proportions. Fortunately, the general organization of the William and Mary curriculum during the decade of the seventies suggested several ways to delimit logically the scope of the research and still address the research questions. The curriculum was basically organized according to general education
requirements and concentration requirements, with twenty Arts and Sciences departments and two professional schools serving as the basic undergraduate educational and administrative units at the College.11 The research began with a review of all departments and schools offering concentrations for degrees to students during the decade. By initially limiting the study to departments and schools offering concentrations, the design reflected a research need to represent the department as the basic organizing unit of the curriculum, and a major as a full course of study taken by students. (While students could and did pursue studies in such areas as Italian or comparative literature, they could not formally concentrate in those areas. The impact of more random course selections on the curriculum was considered to be different from and less than the impact of students pursuing more prescribed, complete courses of study.)

Students chose concentrations in all possible areas offered among the departments and schools. But the professional schools were organized separately and differently from Arts and Sciences departments, and offered different options to students. For instance, each school had its own curriculum committee which established programs of professional study separate from standard undergraduate requirements for specialized study in Arts and Sciences departments. Although both professional schools required students to fulfill the same general education requirements that were set forth in Arts and Sciences, they also required separate application to specialized undergraduate study and offered different certification from Arts and Sciences departments. The School of Education offered a Collegiate
Professional Certificate from the State Board of Education of Virginia and the School of Business, the degree of Bachelor of Business Administration (B.B.A.). For these reasons, the two professional schools were included for study to explore trends in student enrollment and change in these parts of the curriculum.

Among the twenty Arts and Sciences Departments, the Physical Education Department was excluded from possible inquiry due to the effect of Title IX of the Higher Education Amendments of 1972 on the organization and governance of the department. (E.g., Laws prohibiting the use of federal monies in sex discriminatory programs may have influenced curriculum changes significantly). Nineteen Arts and Sciences departments thus remained.

In order to manage the volume of information present after a decade of students registering twice yearly in these departments, representative sampling of the nineteen departments was necessary. Sampling often elicits more accurate information than does a survey of an entire population. For instance, sampling can reduce erosions in research quality that often accompany having numbers of people working with volumes of information over longer periods of time. For this case study, the detailed, exploratory analysis sought made sampling a necessity for a single investigator. In sampling, however, one must attempt to make the sample population representative of the target population being examined.

The most appropriate means to differentiate further and represent adequately the departments emerged as the next consideration. The possibilities were discussed with two department chairmen (one
current, one former), a recent member of the Educational Policy Committee of the Arts and Sciences Faculty, and an Education faculty member who studies aspects of higher education. From these discussions, the investigator decided to differentiate between the departments according to actual number of majors granted in them. In turn, the means of differentiating between departments remained closely allied to a prime consideration of the study—what students had pursued and any influence their pursuits may have had on curriculum change.

In 1975-76, requirements changed regarding majors so that students could declare and receive degrees noting two concentrations. This was a College-wide change. A simple aggregation of all degree concentrations by department during the decade showed where students had majored. Some departments had had more students taking majors with them than others, and a rank-ordering of departments by total number of majors in each was obtained. The literature had suggested that curriculum decisions are linked to trends in enrollment. In turn, the investigation sought to test premises posited in the literature by examining departments with differing enrollment trends (e.g., did a department with high enrollments respond differently from a department with lower enrollments?). Rank-ordering thus differentiated departments by enrollment trends among majors. Further, this rank-ordering created an implicit stratification of departments from which one could systematically sample. In order to study departments representing those where most of the majors had been, those where a moderate number of majors had been, and those
where the least number of majors had been, three departments needed to be selected. In turn, dividing the sum of all majors in Arts and Sciences by three created a sampling interval that permitted, when applied to the rank-ordered list, each department a change of selection proportionate to the number of times students had majored there. A random start eliminated human bias in the selection process. (See Appendix A - Population for Sampling)

Systematically choosing three departments created a manageable population for study as well as a diverse representation of Arts and Science departments in the undergraduate curriculum. Biology thus emerged representing departments in the upper third of rank-ordered departments, Psychology, representing the middle third, and Philosophy, the lower third. Together with the two professional schools, the sample departments and schools numbered five. The sample offered adequate representation of the target population in keeping with the research aim.

One final note regarding the sampling procedure is necessary: prior to sampling, the interdisciplinary concentration was eliminated for possible in-depth analysis because of a wide number of variations in descriptive characteristics. The interdisciplinary concentration had no listing of permanent, organized teaching faculty; it emphasized the student's responsibility in establishing the validity of a chosen course of study; and it had the organizational potential to effect another department or school unevenly. While a feature of the curriculum, the interdisciplinary concentration lacked many of the characteristics common to academic departments. Thus, when examined
from the perspective of student responsibility, of organizational support, or of faculty training and prerogatives, the potential of the interdisciplinary concentration to affect curricular change seemed to derive from combinations of variables different from those among the established departments.

Classification and Presentation of Data. The research question examined in this study involved a consideration of faculty perceptions of student enrollments variables and curricular change variables. Using the Manns and March study of curriculum change (mentioned earlier) as a primary point of reference, two criteria were used in choosing the variables of change: 1) They should have a plausible connection to the particular feedback process under study so that it should be possible to explore faculty perceptions of the influence of students' pursuits on changes that were made. 2) The curriculum changes made in each department or school should be such that the faculty could indicate whether they had been more or less responsive, when making these kinds of changes, to what students had taken. Thus, the regular kinds of changes made annually in the curriculum were judged to be appropriate for this study. Further, the variables were chosen and grouped in a manner similar to what Manns and March proposed as appropriate to this kind of research. The variables differed slightly, however, to describe better the William and Mary curriculum.

Variables. Six variables (listed below) of curricular change were identified. Variables one and two reflected aspects of general appearance of the curriculum since they were related to changes in
course description in the college catalog; variables three and four represented aspects of general opportunity among departmental or school offerings since they were related to addition and deletion of courses and degree requirements in curricula; and variables five and six represented aspects of curriculum accessibility since they were related to change in curricular devices that aid students in organizing courses to fulfill general education and concentration requirements. While other research suggested general kinds of variables that could be applicable to this type of research, the following variables were chosen to approximate a suitable description of the William and Mary curriculum:

1. Variation in numbering of courses. Each course in the undergraduate curriculum has an identification number (e.g., undergraduates courses are numbered at 100, 200, 300, and 400). It was proposed that a change in numbering changed the appearance of a course.

2. Variation in title and/or course description. The college catalog includes titles and descriptions of most courses. It was proposed that a change in either the title and/or course description changed the appearance of the course (whether or not the actual course content changed).

3. Variation in kinds of courses. The departments and schools can add, delete, and modify courses. It was proposed that, taken together, the numbers of additions, deletions, and modifications were assumed to change the general opportunity to take courses.

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4. Variation in number of credit hours required for concentration. Departments and schools establish, within some limits of the college's curricular requirements, the number of credit hours required of students to receive a degree in their respective areas. It was proposed that additions or deletions in departmental or school requirements changed the general opportunity to take courses.

5. Variation in number of courses filling area and/or sequence requirements. To fulfill the general education requirements for an undergraduate degree, William and Mary students took two courses in a single department from each of three areas of the curriculum. Area I represents the arts and humanities; Area II, history and the social sciences; and Area III, the sciences and mathematics. In addition, students completed a sequence requirement: two more courses outside of the student's concentration, designated by each department for sequence credit. (Students were asked to include the Schools of Business and Education in Area II when organizing their choices.) It was proposed that a change in the total number of courses filling area and sequence requirements would change the accessibility of those courses.

6. Variation in number of courses without prerequisite designation. Students could gain admission to some courses only if they had taken certain prerequisites. Courses without designated prerequisites have no such restriction. It was proposed that change in the total number of courses without a prerequisite requirement changed the accessibility of those courses.
A preliminary review of the data showed that changes in these variables usually were slight. In one year a department might change one course number, modify the content of two courses, and change the area/sequence designation of one course. For this reason, the data collection began by using the first year considered in the research as a base year and change was calculated for each subsequent year in relation to the status of the curriculum during the first year. Once again, because the numbers involved for each variable were relatively small, it was feasible to calculate change as an actual number. For example, a change in one course number in 1972-73 was recorded as one. A change in area/sequence or prerequisite designation was recorded as a plus (+) if designations increased, a minus (-) number if designations decreased. A change in concentration requirements was recorded as plus or minus the number of credit hours that changed. (Since the majority of undergraduate courses were worth three credits, change in credit hours was expressed as the fraction of a three hour course represented by the change. For example, if three hours were added to requirements, one change was noted. If one hour was added, then one-third of a course change was noted. For the schools, change in credit hours was expressed as an average of hours required for their respective degree programs. In the School of Education, for instance, when the requirements for eighteen and twenty-seven hours in the elementary and secondary education programs were raised, the sum of course additions was divided by two.) Frequently, changes such as these are recorded as a percentage of curriculum change. The changes recorded here were slight, however; and when stated as an actual
number they were more readily used representations of the changes made. Thus, in the interest of clarity, actual numbers were used.

Since the kinds of changes reviewed in Arts and Sciences required approval by the Educational Policy Committee, the final report of the committee for each year served as a primary source of information. Changes surfacing in the report for a particular year (e.g., 1971-72) were recorded as curricular changes in the following year (1972-73) unless the report noted otherwise. This assumed a standard lag time from approval in the spring of one year to implementation in the fall of the next academic year.

In the professional schools, curriculum committee reports were more informal and listed recommendations for the approval of school faculty rather than approved changes in the curriculum. Minutes of faculty meetings did not describe changes in a systematic or uniform manner. Therefore, information on student enrollments and curricular change in the professional schools was collected and calculated based on the records of the Registrar and the undergraduate catalog of the College.

In addition, since the variables were originally chosen to represent aspects of general appearance, opportunity, and accessibility to students as they took courses, the sum of changes in the two variables comprising each aspect was calculated. One might speculate that a revision of course content or the addition of a new course might represent a substantively different kind of change than would a change in course numbering or course description. Thus, a comparison from one year to the next of the sums in the three
curriculum aspects—appearance, opportunity, accessibility—would show differences among the aspects during the decade from which discussion could evolve.

Implicit in choosing these curriculum variables for reference and discussion is the proposition that a department or school showing change in these variables is also showing responsiveness. To compare the two kinds of trends under scrutiny, the curriculum change information needed first to be viewed along side of pertinent student enrollment data. For each sample unit variables representing aspects of student enrollment were identified. The variables were chosen to represent the courses students had taken and the majors they had pursued in each department and school. The variables were collected and organized in accordance with the way tallies on course enrollments and on majors were maintained at William and Mary. The following variables of student enrollment thus emerged:

1. Total student population enrolled in courses in a department or school. These figures were taken from headcount enrollment tallies on a census date reflecting final course enrollment. A change in numbers of students enrolled in a year was assumed to show a change in what students took.

2. Total student population receiving majors in a department or school. These figures were taken from the Registrar's files on degree recipients that show all degrees awarded between July 1 of one year and June 30 of the next. A change in number of degree recipients was assumed to show change in what students pursued as a specialty area. For example, if 10 degrees were awarded in biology one year and
the next, then students were assumed to be pursuing study in that area in increasing numbers.

These two student enrollment variables were calculated and recorded for each year. It was assumed that the developing pattern of information showed trends in students' pursuits. For example, steady increases in the number of business majors over a period was assumed to be a trend for the period.

Graphs. From the collection of this record of student enrollments and curricular change, graphs depicting this information were then prepared. Because the data showed change over time in more than one variable, a curve chart represented an appropriate, widely used method of depicting the information graphically. The information gathered for all variables was plotted to show the collected data for each sample unit in five graphs—three representing variables of curricular change, two, variables of student enrollment. Twenty-five graphs (five for each sample unit) thus emerged showing the trends for a decade of curricular change and of student enrollments at William and Mary. (See Chapter Four. The graphs are included in the findings for each department or school.)

The graphs suggested some patterns, which in turn suggested some possible questions to be asked of those who had made the changes. Therefore, interviews with people involved in the events depicted graphically were necessary. For example, the graphs showed gross trends in curriculum change. In order to discover what decisions contributed to the trends, questions were needed that addressed those specific decisions as well as any trends perceived by the faculty.
Stated differently, the graphs showed that something had happened, while in-depth interviews could help to interpret a faculties' view of what had happened.

**Interviewees.** The selection of interviewees was guided by the criterion that people who had been formally involved in the curricular decision-making processes of the departments and schools would be most likely to offer a reasonable perspective of the events. In this regard, the primary responsibility for organizing, compiling, and submitting proposals for curricular change lay with department or school heads and curriculum committee heads. For each department and school examined, all who had held the aforementioned positions during the decade comprised the total possible interview population. Since the Educational Policy Committee of the Arts and Sciences Faculty played an integral part in deciding curricular change, the heads of that committee for the decade were also included. Finally, deans and associate deans of undergraduate studies (where applicable) of the respective faculties for the decade were contacted for interviewing in order to elicit their perspectives of the trends that surfaced. (See Table 1) It was assumed that by interviewing people in various positions at the College who had been involved formally in making decisions about the curriculum, different perspectives of the historic information would surface—perspectives that would aid in going beyond the public, written record of the era. In turn, a fuller description of the events under study could unfold to better inform any conclusions drawn about the relationships being examined.
Table 1
Population for Interviews

<table>
<thead>
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<th>Department or School Committee</th>
<th>Population*</th>
<th>Pilot Study Sample</th>
<th>Population Interviewed</th>
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<td>3</td>
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<td>Business</td>
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<td>1</td>
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</tr>
<tr>
<td>Education</td>
<td>13**</td>
<td>1</td>
<td>11</td>
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<tr>
<td>Philosophy</td>
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<td>1</td>
<td>3</td>
</tr>
<tr>
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<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>4</td>
<td>38</td>
</tr>
</tbody>
</table>

*These are the numbers of heads of curriculum committees, departments, and schools plus appropriate associate deans from 1971-72 to 1980-1981. Information was acquired from Undergraduate Program Catalog, 1971-72 to 1980-81, and minutes of faculty meetings in the Schools of Education and Business Administration, 1971-72 to 1980-81. These figures include no acting or interim heads.

**This figure includes Associate Deans of Undergraduate Studies. Four in Business, one in Education.

***This figure includes two Deans of the Faculty, Arts and Sciences, and two Deans, Undergraduate Program, as they held ex officio membership on the Educational Policy Committee.
Interview Techniques. The kinds of information used or associated with decisions to make changes in the curriculum remained the primary concern of the questioning. Using the changes in variables and the graphs as references for the construction of questions, the interviewing was designed to explore the significance, meaning, or rationale that people associated with the events, or trends in events.

Moreover, in the interaction between interviewer and respondent, questions could be clarified or responses explored for enhanced clarity and detail, not only to secure further pertinent information but also to check for inconsistencies in responses, as the need arose. In short, direct observation and interviews offered opportunities for immediate double checks in a number of significant areas that could add to response and research validity. Finally, the interview allowed for personal reassurance and encouragement regarding a free, yet confidential exchange of responses.

At the same time, several weaknesses of using an interview method to obtain information needed to be addressed. The first of these involved reducing respondent bias. The relevance and worth of information gleaned in interviews depends on the respondent's willingness and ability to recall events as accurately and truthfully as possible. If, for instance, a respondent felt that the information disclosed could result in personal embarrassment or professional risk (as in divulging trade secrets), a hesitant, limited response could follow. Further, if a respondent felt that personal or professional
prestige were at stake, responses could be affected.\textsuperscript{23}

In turn, interviewer bias resulting from questions too leading or interaction too empathetic existed as another consideration.\textsuperscript{24} While such techniques as tandem interviewing and non-directive client-centered interviewing could aid in overcoming interviewer bias, several well-trained interviewers were required to carry out these techniques effectively.\textsuperscript{25} For these reasons, these two approaches were not feasible.

Minimizing respondent and interviewer bias hinged primarily, then, on establishing an appropriate interview situation.\textsuperscript{26} Thus, the primary effort of the interviewer remained one of open, straight-forward questioning, while also considering the respondent's convenience and privacy. Further, tape recordings were used in conjunction with an interview guide to decrease recording bias. Taken together, analyzing the charted trends in conjunction with the respondents' interpretations appeared as the most viable means of collecting data for this particular inquiry. Finally, an interview provided an accessible, economical means of acquiring adequate and pertinent information. The kinds of specific, detailed information sought in the research could not have surfaced through the sole use of written surveys or document analysis.

\textbf{Interview Development.} In research, two major types of interview exist: structured or standardized interviews and unstructured or nonstandardized interviews. Structured interviews also can be either the scheduled or the nonscheduled variety. The interviewer has the most control of the topic and questioning in a structured scheduled
Interview, less in the structured nonscheduled, the least in a nonstructured one. Moreover, an interview can contain all three means of asking questions, depending on the research need.27

Scheduled structured interviews require the interviewer to read questions and record responses on a written interview schedule designed to elicit responses in the same sequence and with the same wording for each respondent. This type of interview offers benefits of comparability of responses.

In comparison, nonscheduled structured interviews require the interviewer to use a guide listing the desired information. The interviewer may, however, reword questions or formulate follow-up questions for each respondent to obtain comparable, relevant information. This is particularly useful in situations where the same words may mean different things to different people and appropriately worded questions remain essential for comparability of responses.

Unstructured interviews, in contrast, allow the interviewer to establish topics, wording, and sequencing as the interview unfolds. With this freedom and flexibility, however, goes a requirement for a thorough knowledge of the conceptual framework used as well as of the population questioned. Besides requiring a skilled, highly knowledgeable interviewer, this method also elicits responses that incur difficulties of comparability and thus analysis.

Of the three types of interviews, moreover, research suggested that the structured nonschedule interview represented an appropriate technique, best suited to questioning a heterogeneous population about information that is not discussed widely or openly.28 Further,
well-educated respondents such as curriculum committee heads, who dealt comfortably with ideas were found to resent the restrictions of interviews too structured, preferring instead more interaction with the interviewer. Because the information sought tended not to be widely discussed, and comparability of responses remained a research need, a structured nonschedule interview guide was developed and used. Finally, the exploratory nature of the research made this form of more open interviewing essential.

An initial list of approximately forty possible questions was drawn up to correspond to each facet of student enrollment and curriculum change being studied. A department chairman, a former department chairman and Educational Policy Committee member, a sociologist on the Arts and Sciences Faculty with experience in interviewing, and one faculty member each from the two professional schools were consulted about initial wording, sequencing, and the content validity of the questions. From this, eighteen questions (some with alternate wording and several parts) were developed.

These eighteen questions were then pilot tested with four members of the total population who represented each of the major groups being questioned. (See Table 1) One representative from each of the professional schools, one from the Educational Policy Committee, and one from an Arts and Sciences department were interviewed. These representatives were chosen to reflect possible differences among the groups sampled. A faculty member who had previously been an Educational Policy Committee member as well a department chairperson, was included so that his responses could serve as a comparison for
validity of the other pilot interview responses in Arts and Sciences. A member from each of the professional schools was also chosen to allow for comparison of responses from each. Alternate wordings and variable sequencing were tested in the pilot interviews to determine reliability of responses. Reliability was determined when the same kinds of responses emerged from different question sequencing and alternate wording.

Where alternate wording elicited the same response, one alternative was dropped. Each interview was also checked for consistency of responses. Responses of Arts and Sciences faculty were charted and compared and responses of professional school faculty were charted and compared to determine validity. Thus, through observation, comparison of responses, and comparison of responses to different, yet related questions, the reliability and validity of the interview guide for probing the complexities of the research questions was established.

Thirteen basic questions, each with related follow-up questions emerged from the pilot interviews. (See Appendix B) Where possible, coding categories were established based on the pilot interviews.

Prior to the actual interview process, letters were mailed to the respondent population to acquaint them with the study and seek their participation. (See Appendix C) The investigator thought that some prior familiarity with the interview topic was necessary due to the detailed nature of the questions. Interview appointments were made by telephone. Individual interviews usually lasted approximately forty-five minutes, but they varied in length from thirty minutes to
two and one half hours. The investigator conducted the interviews on a daily basis during March and April of 1983. A transcript of each taped interview was made as soon after the interview as possible. The transcriptions produced several hundred pages of rich description about a decade of curricular adjustments at William and Mary.

The first step in data analysis was to group the responses by department or school. Responses from each department and school were thus compiled, analyzed, organized, on a question by question basis and presented in five case analyses. The five specific case analyses were written with reference to the sequence of the decade's events. Responses of the Educational Policy Committee were also presented to offer a fuller perspective of curriculum negotiations in Arts and Sciences and of institutional policy considerations. In this way the study sought to determine whether a relationship existed between students' pursuits and six kinds of curricular change at William and Mary from 1971-72 to 1980-81.

Weaknesses and Limitations. While the methodology used here offered the best of several alternatives, certain limitations on the use of the findings also exist. Although collecting data about parts of one college curriculum reduces the number of confounding variables and permits more detailed probing, this, in turn, reduces the external validity of the findings. The findings pertain, therefore, to the particular setting studied at William and Mary. Such exploratory findings may, however, be helpful to others in clarifying similar relationships (between student demand and curriculum change) and in suggesting further inquiry.
Furthermore, because interviews rely upon the respondents' memory, willingness to be forthright, and reflective capacity, weakness inheres to using such a strategy to gather data. Despite having the public record of student enrollment and curriculum change as factual reference points, concealed or distorted responses may bias the findings. Interviews were considered, nevertheless, to be the most appropriate means of gathering the needed information. Since no one stood to gain from inaccurate responses, suitable conditions for forthright responses existed. Also the interviewer assured the respondents of confidentiality, and encouraged recollection and reflection.

Similarly, information gathered in interviews remains subject to interviewer bias. Having developed and tested the interview guide with consultation and care, using only one interviewer who was thoroughly familiar with the study, and consulting on the coding of responses represented points for reducing interviewer bias as well as for increasing reliability of responses.

Little validation exists for the responses reported here—a weakness common to such exploratory inquiries. The various department, school, and curriculum committee heads were asked to give their own recollections. Since certain facts about student enrollments and curriculum change had been gathered and used as references, these served as points of comparison and reflection, to stimulate recall and interpretation. Also, a comparison of responses within each group was made as a validation check among those interviewed.
Finally, since trends in student enrollments was one of the two foci of the study, students' views of their own pursuits would further contribute to a fuller description of the events being examined. So also would students' views of the curriculum changes made enhance the study of this phenomenon. To secure the views of approximately seven generations of William and Mary students represented an expensive, long-term endeavor for a single investigator. Further, such an investigation of students' views went beyond the aims of this research. Therefore, students' views were not sought.

In summary, the expressed purpose of this study was to examine a feedback process, using a single investigator with a particular research perspective, to discover what things faculty perceived as having informed their decisions to make routine curriculum changes. In keeping with the purpose of the research, the research design was appropriate.
Notes: Chapter III


5. See the context of higher education in the 1970's in the review of the literature.


8. For further information on undergraduate requirements see Undergraduate Program Catalog: William and Mary, 1971-72 through 1980-81. For information on attrition rates see Student Data Book, January 1982 (Williamsburg, VA: Office of Institutional Research, William and Mary, 1982).


11. Summer sessions were excluded from the analysis because of exogenous variables in the organization of governance of the sessions from year to year.

12. Babbie, p. 73.


In a study by Curtis L. Manns and James G. March, "Financial Adversity, Internal Competition, and Curriculum Change in a University," Administrative Science Quarterly, 23 (1978), 541-552, eight variables of change were identified that described aspects of variety in course offerings, course packaging, course accessibility, and course benefits to students. While the variables and general aspects reviewed in this study were, in part, patterned after those in the Manns and March study, the accessibility of data, the design of this study, and the idiosyncracies of the William and Mary curriculum contributed to a decision to use the variables and general aspects described here. See the review of the literature for further discussion of the contribution of the Manns and March study to the basic ideas of this research.

The information on curricular change was taken from sources:
Undergraduate Program Catalog: William and Mary, 1971-72 to 1980-81;
the Final Report of the Educational Policy Committee: Faculty of Arts and Sciences, 1971-72 to 1980-81.

Headcount course enrollment was calculated from the record; Course by Course Enrollment Distributions, maintained in A-1 file by the Registrar's Office, College of William and Mary, Williamsburg, VA, 1971-72 to 1980-81. These data were compiled at the end of the add/drop period each semester (approximately three and one half weeks into each semester).

HEGIS Form, NCES 2300-2.1A, Degrees and Other Formal Awards Conferred Between July 1 and June 30, 1971-72 to 1980-81.


26 Richardson, Dohrenwend, and Klein, pp. 59-124.


28 Richardson, Dohrenwend, and Klein, p. 52.

29 Richardson, Dohrenwend, and Klein, p. 304.

30 Sellitz et al., pp. 51-65.

31 Sellitz et al., pp. 51-65.
Chapter Four

Findings

In 1971 the faculty at William and Mary implemented a revised undergraduate program. This represented the first major curriculum revision in thirty-five years at the College. The 1971 revision made provisions for basic degree requirements of 120 semester credits in academic subjects and four in physical education; did away with a traditional general education scheme of distribution requirements; and, in its place, added a program of proficiency, area, and sequence requirements. Giving students greater freedom in course choices represented one aim of the 1971 revision. Under this curriculum, students were asked to complete several requirements: 1) satisfy proficiency requirements in foreign languages, writing, and physical education (exemptions could be obtained from each of these by demonstration of proficiency); 2) complete two semesters (area courses) in a single department, (outside of in their department of concentration, in each of three areas (Area I--the arts and humanities; Area II--the social sciences; Area III--the natural sciences and mathematics); and 3) take two other courses outside their concentration area to form a logical sequence of two introductory and two advanced courses. Candidates for the B.A., B.S., and B.B.A. were to accomplish these general education requirements. B.S. candidates were to take two additional semester courses in a science different from their concentration and in accord with departmental requirements for concentration.
This basic structuring of requirements remained in effect, with only slight adjustments for the period of this study, 1971-72 to 1980-81. In the years after the revised curriculum took effect, questions surfaced among the faculty over the ways in which various departments had adjusted to the changed program. This was particularly the case with regard to the designation of area and/or sequence courses. Generally speaking, most faculty established a scheme or pattern for designating the courses that reflected the nature of courses (e.g., usually courses with area designations present an introduction to a discipline, while sequence designated courses offer more advanced study) as perceived from the respective departmental disciplines.\(^3\) (Courses in the two professional schools do not carry area or sequence designation). By 1976, several other questions had arisen concerning the faculties practical and philosophical concerns with the revised program. An ad hoc committee was formed to study the undergraduate program that ultimately proposed another curriculum revision in 1979. The proposal was, in turn, voted down by the Faculty of Arts and Sciences. Thus, evolving adjustments rather than radical reforms marked the ten year period that ended in 1980-81.\(^4\)

Two other College-wide curricular changes occurred in the ten year period. In 1976, students were allowed to receive recognition on their transcripts for two majors. Secondly, in 1980, students were also allowed to declare and receive notation of a minor area of concentration. In the various departments and schools, concomitant
(and sometimes less readily visible) adjustments occurred. Some faculty refer to these adjustments as "housekeeping" routines, procedures for keeping curricula current to the needs of the people involved in the program. During the decade under scrutiny, these routine changes described the drift of the undergraduate program.

Ultimate approval of the college curriculum is vested in the College's Board of Visitors. In practice, the Board acts upon those questions of educational policy which deal, for the most part, with granting new degrees and approving new programs in departments. Board action is usually in keeping with regulations established by the State Council of Higher Education in Virginia (S.C.H.E.V.). Also in line with S.C.H.E.V. directives, faculty in the departments and schools manage the undergraduate curriculum. Responsibility for curriculum management falls generally to specific curriculum committees.

At William and Mary, the Educational Policy Committee (EPC) of the Faculty of Arts and Sciences deals with undergraduate curricular matters for the Arts and Sciences. The EPC consists of faculty members elected from the departments, students, the dean of the faculty, and the deans of the undergraduate program. The deans serve in ex officio capacities. The Schools of Business Administration and Education also have curriculum committees, whose membership include neither undergraduate students nor the schools' deans. Recommendations for substantive curriculum change in all three curriculum committees go before their respective faculties for approval. In Arts and Science, changes that do not alter existing policy are handled in negotiations between the E.P.C. and the various departments. In the professional
schools, a similar, though not as complex approach exists for curriculum changes within existing policy.

In the Arts and Sciences departments under study, the Biology Department granted 1138 majors during the decade, the Psychology Department granted 811, and the Philosophy Department, 318. During the same period, in the professional schools, the School of Business Administration, recorded 1295 concentrations, the School of Education, 596. In Arts and Sciences, students also selected various courses to fulfill area and sequence requirements. Throughout the College, various students and faculty discussed program arrangements, degree requirements, and academic expectations. This research focused on the following question: did the trends in students' pursuits influence the faculty as they made routine curriculum adjustments?

The following case analyses represent one perspective of how the aforementioned faculties viewed the relationship between their students' pursuits and their own concomitant "housekeeping" deliberations. First, the views of respondents from the pertinent Arts and Sciences committees will be described. Then, the responses of those interviewed in the professional schools are discussed.

**Educational Policy Committee--Faculty of Arts and Sciences.** Educational Policy Committee (E.P.C.) members represented the Faculty of Arts and Sciences. When the departments proposed routine changes in their curricula to the committee, the E.P.C.'s work was that of making decisions about the merits of the proposals in keeping with their view of current educational policy. During the interview, questions asked of E.P.C. members were oriented toward discovering
what kinds of issues they considered as they discussed the departments' proposals. Since the E.P.C. served an important review function and often was acquainted only with a change proposal as written or explained by a departmental representative, E.P.C. members could not be expected to know all of the reasons behind departmental proposals. Hence, E.P.C. members were asked to discuss generally the kinds of things that had informed their decisions to approve or disapprove proposed changes. In this way, the study sought to place the adjustments of the three Arts and Sciences programs being examined in the context of undergraduate program. The interview subpopulation consisted of ten people who had served on the E.P.C. during the decade.

Former Educational Policy Committee members recalled that although there was student representation on the committee throughout the decade, the degree of student participation fluctuated. They remembered the majority of students as passive participants. Several faculty, however, recalled two particularly vocal, active students during the ten year period. These two students "did their homework" and provided valuable information to the committee by all accounts. Most faculty on the E.P.C. thought that student members tended to give a representation of the students' point of view, some of which was helpful, some of which was not necessarily in keeping with "faculty notions of a sound education." In general, the faculty felt that the degree of student influence on the E.P.C. deliberations depended on the confidence, knowledge, and demonstrated interest of the student.
E.P.C. members were asked to rate the usefulness of certain contexts for receiving information about students' concerns with the curriculum. The ratings could range from 1, indicating a context that was not at all useful, to 2, indicating a context that was somewhat useful, to 3, indicating a context that was very useful. The rating shown for each context is an average of the ratings given by each respondent group. For example, with the E.P.C., these ratings represent an average of ten responses.) Faculty responses tended to vary according to the kind of activities in which they were involved and how they viewed any information that might have emerged in a particular context. Most E.P.C. members queried rated faculty feedback (2.3), the Flat Hat or other student publications (2.3), and sitting on committees with students (2.3) as the most useful contexts for receiving information about students' curriculum concerns. Next, they ranked in class (2.2) and in academic advising (2.2) as relatively useful, however, their rankings were less consistent here (varying more between "not at all" to "a great deal"). Student evaluations (2.1), were ranked as somewhat useful. But the ratings of student evaluations, academic advising, and in class varied depending on whether the faculty member engaged in these activities (e.g., advised or sought information in class) and on how the faculty member viewed the kind of information surfacing in those contexts. Similarly, the remaining contexts were rated as somewhat useful or not at all useful: entertaining students in your home (2.0), student activities like clubs and honorary fraternities (1.4), and student organized social or sports gatherings (1.1).
When asked about specific topics discussed on the EPC, answers tended to reflect the tenor of the times when that person served. For instance, in the early 70's faculty participants recalled little discussion about trends in student majors. One person said, "We were primarily concerned with implementing the curriculum revision of 1970 ... interpreting ... laying up guidelines ... modifying as problems were discovered." The topic of trends in student majors was only incidentally discussed in the early years. As the decade unfolded incidental musing gave way to informal discussion when committee members noticed shifts in student majors. They saw more students going to the professions (business and medical school were specifically mentioned) and they wondered about the merits and/or problems of re-allocating faculty resources in the direction of these shifts. More discussion ensued culminating in a formal review of the undergraduate program beginning in 1976. Cohort tracking done on the Class of 1978 as background for the review, revealed not only patterns in student majors for that class but patterns in the courses students were pursuing as their undergraduate course of study. The 1976 review, the discussion of possible new majors in computer science and fine arts (also a part of the review report), a consideration of job markets facing students, and the aforementioned shift in student majors to business concentrations were topics of discussion in the latter half of the decade.

EPC members serving in that latter half read the information made available to them on student trends. Respondents serving in the early years indicated that they did not seek out such information. Some
members serving in the late seventies noted that they not only attended to national trends in student majors, they also kept books on current curriculum trends on reserve at the College library for perusal by interested faculty.

In 1976, the double major was instituted in large part due to student pressure. In the view of those queried, students felt the notation of two majors on their transcripts would help them with future employment or educational opportunities. At first many faculty resisted a move to double majors with the argument that two concentrations represented too much specialization in a liberal arts curriculum. Many believed that the breadth component of a liberal education would eventually become secondary to the depth component if students pursued two specialities. Also, some faculty were not sure that the "extra credential" would necessarily be as helpful as students hoped. The double major finally became an option for students, however. The students' request for a double major option surfaced in the Board of Student Affairs, went to the EPC, and finally to the full Arts and Sciences faculty for a vote. Most EPC members interviewed voted for the move to double majors. The double major did allow a student to pair a "practical" major with a major in a more traditional discipline. In contrast, one respondent noted, "The more I saw of the double major in operation, the less enthusiastic I became." (Here, the implication was that students did not always choose suitable double majors or perform as well as they should when they pursued two disciplines.)
According to E.P.C. respondents, the minor became an option to students in 1980, not only because of a similar student desire for a vita notation, but also to counter what some perceived as the negative effects of the double major. The faculty believed that students were too specialized, not taking enough elective courses, and were being pressured into two majors. The minor offered an alternative solution to those difficulties while still allowing students a permanent transcript notation. All EPC members interviewed voted for the minor, with several noting that they still felt there was little educational merit to the move.

The EPC did not discuss the frequency of course offerings during the decade, assuming that establishing how often a course would be offered was better determined at the department level. As for scheduling topics courses (or any other courses that appeared to be "languishing in the catalog"), the EPC did begin to make recommendations toward the latter part of the decade. These policy guidelines appear to have emerged as a result of three general considerations: 1) an increasing interest in appropriate allocation of faculty resources, particularly given "the state of our budget and our faculty;" 2) an interest in clarifying what courses actually would be available to students; 3) and an interest in ensuring a variety of course offerings. All EPC respondents indicated that student enrollments represented a practical consideration of the departments when deciding how often to schedule a course. Other considerations along these lines involved faculty interest, faculty teaching loads, and the requirements of the disciplines. "Departments
are fairly pragmatic. If a course is offered every other year but gets a lot of student interest, then the department is likely to offer it every year, unless it's a small department."

Students did not comment to the EPC regarding course frequency, although occasionally EPC members heard comments about class size. The EPC discussed class sizes only generally and more in the latter years of the decade as they noticed the numbers of students in classes drifting upwards. One EPC committee chairman asked the Office of Institutional Research to survey class sizes (in relation to a pending decision about a writing program). While the drift to larger classes was informally confirmed in many quarters, nothing was done. "We found at practically every turn...[that class size decisions]...were driven by the formula provided by the state." The formula, it seemed, provided one rule to follow where pedagogical considerations about class size did not hold sway. This same respondent also noted that class size "is built on a fragile foundation. There are really no rules....Theoretically, a department could say 'we want all the classes to be 15, and we're not taking more. Obviously that would break the system if someone did that." In the view of most EPC respondents, departments considered class format, student demand, faculty resources (both present and hoped for), and the number of FTE's generated by a given class at a particular level (e.g. levels 100, 200, 300, or 400) when they adjust curricula.

Most EPC respondents indicated that changes in course numbering proposed by departments to the EPC did not generate much discussion on the committee in the early 70's. The committee looked for logic,
relationship of course difficulty to course number, and consistency of numbering with regard to each department's numbering scheme. Later in the decade, however, when the state began allocating money based on course level, course numbering was formally and frequently discussed. One respondent commented, "it was to our financial benefit to raise the number of the courses. . . ." Another said, "numbering . . . gradually became a game that was influenced by state policy of allocating funds on an FTE ratio basis." Thus, in the view of these EPC respondents, numbers may have been changed to encourage enrollments at course levels advantageous to FTE tabulations.

In addition, EPC respondents indicated that departments used course numbers to indicate level of difficulty. (e.g. lower numbers, less difficult for pre- or non-majors; higher numbers, more difficult for majors or seniors). Students never suggested a need for changes in course numbering to the EPC. (Some EPC respondents did remember, however, that students had suggested a need for numbering changes at the departmental level).

Most respondents did not recall students suggesting the need for changes in titles or descriptions to the EPC. The committee considered clarity, truthfulness, brevity, accuracy, and relevance, in discussing title and description changes. Several respondents noted that enough specialization existed in Arts and Sciences departments to make it difficult for one faculty member to question another's choices of title or description. Student "consumer" protection existed as a concern in educational policy discussions. Most EPC respondents thought that courses had changed over the decade even if their title
and description had not; they thought that content, texts, teaching
emphasis, knowledge base, and faculty interests had changed. Here,
respondents tended to generalize from their own experience. Some
noted that titles and descriptions are meant to be general—to allow
flexibility within certain guidelines so that one did not have to pass
every change through a committee. In short, titles and descriptions
could serve as a ready form inside of which change could occur.

Most EPC respondents indicated that titles and descriptions might
be used to attract specific student audiences or to encourage
appropriate student preparation and choice. In contrast, three
respondents saw no relationship between changing titles and
descriptions and encouraging or discouraging enrollments.

Proposed additions and substantive modifications were discussed
in light of the following considerations: 1) fit (e.g., did the
course belong in a department and in the undergraduate curriculum); 2)
faculty qualifications to teach the course; 3) merit or worthiness of
the course; and 4) overlap with courses offered in other departments.
Several noted, moreover, that the EPC seldom rejected a course. "We
would try at least to message it into shape."

The occasional course that was rejected by the EPC usually had
several factors weighing against it, i.e. insufficient faculty
expertise in a proposed topic, nontraditional orientation, trendiness,
or apparent attempts "to pander to students." The EPC respondents
perceived adding or substantively modifying courses in a departmental
curriculum as one way to attract more or different kinds of students.
Some said that adding courses to attract different kinds of students
was a common, healthy thing to do. Changing faculty interests were also cited as a significant factor in decisions to add or substantively modify courses.

EPC respondents recalled few requests to drop courses from the departments. One dean noted, "I would . . . say that dropping a course [from the curriculum] is a rare event." EPC respondents thought that low enrollments coupled with loss of faculty interest contributed to dropping courses. When asked if low enrollments contributed to making a course required (as opposed to dropping it), one half of the EPC respondents said that if that happened (and there were examples given of it happening), sound pedagogical reasons were also involved in such a move. (As an afterthought, one person added that enrollment considerations were not likely to show up in departmental proposals coming before the EPC.) In contrast, the other half of the EPC respondents did not think that low enrollments would contribute to making a course a requirement.

The three primary considerations of the EPC regarding credit requirement changes for majors were as follows: 1) to keep requirements within established limits (27 to 42 hours); 2) to maintain fairness and simplicity of requirements; and 3) to insure the appropriateness of the requirement. Several respondents noted that departments have a lot of latitude in deciding about requirements for majors, although some were quick to add that the committee tended to look "with skepticism" upon requests to increase credit requirements. Except for occasional instances of students coming together over a particular issue (as they did when wanting a change in credit
requirements to allow students to major in computer science or a similar, proposed change to allow for studio arts majors) students said little to the respondents about credit requirements. One respondent said of the students, "They are quite willing to live with the principles although they don't like the particular application of it." Several respondents replied that they did not think credit requirements were changed to encourage or discourage enrollments, since the tendency was for departments to stay in line with each other. In contrast, half of the respondents indicated that when departments are deciding to change credit requirements they do consider what the change will do to their enrollments. One said, "If you want more students, you tend to lower your course requirements to the minimum, if you still think you can have a sound curriculum. Your perception of a sound curriculum tends to be influenced by the number of students you have."

After the early periods of adjustment to the revised curriculum of 1971, monitoring area and sequence designation of courses was left, for the most part, to the departments. The EPC attempted to lay out ground rules for designating a course as area or sequence, but some noted that it became difficult to counter a department's argument about what constituted an area course or a sequence course in a particular subject area. The possibilities for designation seemed to vary with the disciplines. As departments began to designate courses as they saw fit, the EPC "quickly lost control." Although still thought of as a legitimate educational policy, many described area and sequence designation in the late seventies as an issue gone "by the
board." At the inception of area and sequence requirements, committee members recalled students commenting on the disparities and complexities of the new system. Those who served in the latter part of the decade tended not to recall much student comment. EPC respondents viewed area and sequence designations as a means of guiding students choices in keeping with the revised curriculum design. While most respondents considered it a possibility that area and sequence designations were used to make more courses accessible to students filling general education requirements, they also said that that would not be the only factor involved in the designation process. Disciplinary and philosophical considerations would influence area/sequence designation. One member who served on the EPC for seven years commented, "Nobody wanted to be left behind in the race. [D]epartments want to make sure that they have courses that students from other places [e.g. non-majors] will find practical."

Similarly, EPC respondents viewed prerequisites as a departmental concern. Although the EPC would look to see if prerequisite requirements appeared logical, fitting, and reasonable, the individual instructor in conjunction with a department representative usually justified prerequisite use. The committee usually went along with the department's request. Only two EPC respondents recalled student comments about the use of prerequisites and neither were to the committee nor recent. When asked if they thought prerequisite requirements were used to encourage or discourage enrollments in certain areas, many EPC respondents said that prerequisites were sometimes used to ensure appropriate student preparation, particularly
in upper level courses. Thus, in one sense, prerequisites tended to
discourage non-majors or less serious students. Respondents noted
that this represented a practical and pedagogical consideration,
particularly in consistently over subscribed courses where faculty
must decide how best to convey subject matter and for whom teaching
resources will be used.

Finally, EPC respondents ranked all of the aforementioned
variables according to the degree to which they thought enrollment
considerations had been a part of decisions to make curricular
changes. The area where most respondents ranked enrollments as a
consideration was in their deliberations over addition (2.5) and
substantive modifications (2.3) of courses. In descending order, EPC
respondents ranked the other variables as follows: deletion of
courses (2.1), change in credit requirements for majors (1.9), change
in area/sequence designation (1.8), change in description (1.8),
change in the number of courses without a prerequisite designation
(1.7), change in course number (1.5), and change in course title
(1.5).

Furthermore, several interesting points of view surfaced in an
open-ended question at the end of the interview. One person noted the
following:

Most of these decisions are so decentralized and nobody
looks at them except the department. Overwhelmingly . . .
the curriculum is driven by individuals. People teach their
expertise . . . teaching a few required courses and then
developing what they like. Change amounting to 3% per year
[here] is a big change.
Another concurred, "I think curriculum changes occur just because of the faculty." Others thought that changes were informed by broad social changes and by the faculty's view of the College's mission, (with considerable time given to discussing what a liberal education means today and what that kind of education involves). Enrollments were cited as a consideration but not the main consideration. One person carried this theme even further: "We're not really interested in making people experts, but in developing a certain kind of attitude or stance and critical abilities—to read, to write, to analyze, to communicate ...." In contrast, one person concluded:

I have no feeling at all that curriculum proposals brought to the EPC were motivated by practical considerations. My general impression is that changes were always made in terms of what the department thought was best suited to the preparation of students as a major in that field.

Arts and Sciences Departments

How did members of Arts and Sciences departments respond to the same questions? A difference in interview format was necessary at this point. EPC respondents were asked to recall generally the deliberations in which they took part. In the departments, while the same questions were used, data was presented by the interviewer concerning specific changes that they had made in each department. This was deemed necessary to aid respondents in their recall of events.

Biology. The three respondents interviewed from the Biology department said that the department did not have undergraduates on its curriculum committee during the decade. While these respondents did
discuss curriculum concerns with students informally, two of them said that undergraduates did not have enough background or expertise to aid in curriculum policy decisions. In contrast, the third respondent said that he received a great deal of input on the students' point of view regarding course and curriculum changes. Respondents from Biology viewed faculty feedback (2.6), academic advising (2.6), and student evaluations (2.3) as contexts useful for receiving information about students concerns with the curriculum. They rated in class (1.6) and in casual associations with student friends (1.6) as having some usefulness in that regard and the remaining contexts were not useful at all.

Respondents from the Biology Department expressed concern over the large numbers of majors with which they had sought to deal in pedagogically sound ways (e.g. using teaching practices thought to encourage learning in a subject area). Economic factors such as departmental budgets, lab expenses, and faculty teaching loads, were a constant consideration. Despite the difficulties of balancing student demand and departmental resources, the department never seriously considered placing restraints on the numbers of students enrolled. One respondent noted, however, that "if we were about to lose three faculty members because the number of majors had dwindled, we might be more concerned..." All biology respondents read information on trends in student majors over the decade. Some of this information came from college sources, some from the National Science Foundation, and some from colleagues at other schools. These respondents viewed the move to double majors and to minors as a student initiated change...
for increased credentials. Two respondents did not support the move to double majors, thinking that it encouraged overspecialization. Two respondents had supported the move to minors.

Frequency of course offering was not usually determined when a course was introduced to the biology curriculum. Factors affecting frequency of course offering were as follows: 1) student interest or demand; 2) faculty teaching load; 3) faculty leaves of absence; 4) and general balancing of required and elective courses in the biology curriculum. Respondents recalled students comments over the difficulties of scheduling around alternating courses. One person said that sometimes students comments affected the frequency of course offerings, but the others said "not really."

Setting class sizes was described as "almost exclusively a space function with us." Lecture sections were allowed to enroll as many students as the room would hold; lab sections took as many as the laboratory facility accommodated. In a relatively large, oversubscribed department, finding room to teach biology the way the department thought it should be taught presented difficulties. To serve the large student ranks, the department had at times "three labs going concurrently and two sequences a day every day of the week." Also Introductory lecture sections tended to be larger than other course sections. Student comments over class size were cited as nonexistent or infrequent. In contrast, faculty comments about class size were numerous. One respondent said, "I almost found it necessary to file an environmental impact statement before going out with them," (e.g. taking students out for field experience). Respondents felt the
pressures of increasing undergraduate enrollments particularly in their introductory level courses. One noted that if the trend continues they may have to place restrictions on class sizes—but it would be with reluctance. Biology appeared as a popular science for students filling general education requirements. "If a student wants to take biology . . . you don't want to compel that student to take . . . whatever science he/she can take just because there's a space in it." Enrollments then, influenced the number of sections offered and how often sections were taught.

The graphs in Figures 1 and 2 reflect curriculum adjustment trends and student enrollment trends for the Biology Department. The graphs were not shown to respondents. Rather, they were used prior to the interview situation to aid in constructing interview questions. (The specific information which was used to construct the graphs was given to respondents to aid in recall.) Later, the graphs were used as a point of discussion and comparison after all interview responses had been collected, analyzed, and presented. (See Chapter Five for discussion of this procedure.)

At this point in the interview, specific information was given to the respondents concerning the curriculum changes in their department to aid them in recalling events. For example, the interviewer would indicate how many courses had been added in a given year and state the name(s) of the course addition(s). Respondents were then asked to recall the reasons for the change(s).

In the curriculum change graphs for biology, graph 1A, Aspects of Appearance, which depicts how many numbers, titles, or descriptions
Figure 1
Trends in Curriculum Change - Biology

A. Aspects of Appearance*        B. Aspects of Opportunity**        C. Aspects of Accessibility***

* Aspects of appearance represents trends in changes in course numbers, titles, and descriptions.

** Aspects of opportunity represents trends in course additions, deletions, and modifications and changes in credit requirements for majors.

*** Aspects of accessibility represents trends in the area/sequence designation of courses and in the number of courses without a prerequisite designation.

(See Chapter Three, "Classification and Presentation of Data," for a full explanation of how these data were compiled and presented in graphs. For all curriculum change variables, changes were calculated using 1971-72 as a base year.)
Figure 2
Trends in Student Enrollment - Biology

A. Headcount Enrollment

B. Majors Granted
changed, showed the most change over the decade. Six of these kinds of changes occurred in 1972-73, twenty-one changes occurred in 1977-78, and in several years (1975-76, 1978-79, 1980-81) no change occurred. In comparison, Aspects of Opportunity, Graph 1B, shows only moderate change. (Four courses were added in 1972-73, one in 73-74, two in 78-79, five in 79-80, and one in 80-81). Since no changes in credit requirements for majors occurred during the decade, the cumulative effect of changes in this second curriculum aspect is only slight change. In graph 1C, Aspects of Accessibility, showing change in the number of courses with area/sequence designation and change in those courses with no prerequisite requirements, some change occurred in these variables in each year. The department began with twenty-five courses having area/sequence designations, fluctuated between a low of twenty-three (calculated as -2 on the graph) and a high of twenty-eight (e.g., +3) during the decade, and ended with twenty-seven courses (e.g., +2) in 1980-81. In 1971-72, there were eleven courses without prerequisite designation and by 1980-81 there were three (calculated as a -8 on the graph). The combined effect of only slight area/sequence designation changes and decreasing numbers of courses without prerequisite designations is indicated on the graph as negative sums.

The student enrollment graphs show increases in the number of undergraduates enrolled in biology courses over the decade. The department began in 1971-72 with approximately 1900 students enrolled, had between 2100 and 2250 students until 1976-77, and stayed between 2250 and 2400 for the remainder of the decade. Biology majors
numbered 72 in 1971-72, 137 in 1975-76, 115 in 1975-77, 145 in 1978-79, and 124 in 1980-81. Thus, the trend in biology over the decade was toward increasing enrollments in courses and toward a greater number of majors.

The respondents were then asked about the reasons for the specific changes that ultimately produced the effects depicted in the graphs. When changing course numbers, the Biology Department considered the logic, sequence, and consistency of their numbering system (lecture sections and accompanying optional labs were given consecutive numbers to aid in record keeping). Further, they attempted to make the number fit the level of work expected in the course. Occasional re-numbering of courses at the 400 level allowed graduate students to receive credit for these courses. Some renumbering reflected a "Free Curriculum" established by the Department in 1975; one course number was expanded to several numbers to facilitate record keeping for students engaged in the Free Curriculum in the junior and senior years. (The Free Curriculum was designed to allow able students to elect a more independent course of study as they majored in biology.) Respondents from the Biology Department, said that they considered to some degree how a change in numbering might affect students, but on the whole thought numbering changes had little effect on students. Respondents stated that students commented only occasionally (if at all) about course numbering. Numbers were not changed with thoughts of either encouraging or discouraging enrollments. Rather, the primary concern seemed to be one of managing large enrollments.
Changing titles and descriptions in the Biology Department during the decade reflected the hiring of new faculty, as well as changing faculty interests. Several description changes signaled the advent of optional labs with certain lecture sections (an attempt to deal with overwhelming student demand in the face of insufficient lab space). Only the more serious students would need to take the labs, while interested students could still partake of course content in the larger lecture sections. The Biology Department changed titles and descriptions in hopes of making these options clearer. No one recalled a student suggesting the need for a change in title or description. Respondents thought that courses whose titles or descriptions had not changed over the decade had changed nevertheless due to changes in a field, in teaching approach, and in texts. Finally, neither titles nor descriptions were changed to encourage or discourage enrollments.

When courses were added or substantively modified it was usually a result of the addition of new faculty, faculty interest, change in departmental ideas about what was needed in the program, or changes in approach to a subject. One example, the Free Curriculum, represented an interesting addition that grew out of a faculty member's interest in allowing students more freedom and independent study as they pursued a biology concentration. From the existing biology curriculum and areas of faculty expertise, students could organize courses consisting of independent readings, of combinations of parts of courses (if pursuing a particular theme), of individually organized laboratory experiment, and the like. Unfortunately, the
experiment"fizzled" from lack of student interest. Students were viewed as either uncomfortable with or not interested in this less structured approach to majoring in biology.

Students usually subscribed to new courses in biology, but one respondent noted, "[Students] don't commit themselves very readily sometimes to the unknown." Another respondent noted that faculty sometimes are also reluctant to try new things. In concert with faculty interests, students suggestions did contribute to occasional additions and substantive modifications in courses. When faculty found student support for ideas which they (faculty) supported, then something new might be tried. While some courses were added, in part, to attract students who were not biology majors, the primary reasons given for course additions focused on the educational merit of the course.

No one could recall any courses that were actually dropped from the curriculum during the decade. Most courses that seemed to disappear were re-shuffled or absorbed into other courses with the exception of the Freshman Seminar. The Freshman Seminar was a product of the revised curriculum of 1971. The Biology Department attempted to provide the seminar for a brief period, but became frustrated at trying to discuss topics in biology in a seminar format with freshman (who were not well-prepared for in-depth discussion). Also, some objected to convening a class for only fifteen students when teaching loads were so heavy. Student interest dwindled as well. Moreover, respondents noted that when and if courses were dropped it probably occurred as a result of lack of student demand and waning faculty
interest. Finally, respondents said that they did not make a course a requirement simply because of low enrollments.

Credit requirements for majors did not change in the Biology Department over the ten year period. The department's respondents viewed the requirements as adequate, believing that students had to take enough science as it was, and needed exposure to other courses (in the arts, humanities, or social sciences). During this period, students did not suggest to respondents the need for a change in credit requirements.

Although the number of courses with area or sequence designations increased over the ten year period, the increase represented additions to the biology curriculum rather than any attempt to make more courses accessible to students. "We have plenty of students," answered one, the implication being that there was no reason for the biology department to try to increase enrollments in this particular fashion. Area/sequence designations were assigned in keeping with a desire to offer an introduction to the discipline in area courses and to offer some flexibility in choices for students in sequence courses.

The number of courses that the Biology Department offered without a prerequisite designation decreased over the decade. The respondents indicated that this resulted from several factors. One was an attempt to have the catalog outline more precisely for students the expectations of the department regarding appropriate preparation for certain levels of courses. In the view of the respondents, certain introductory level courses had always been logical prerequisites for other upper level courses, whether the catalog stated it or not.
(Academic advising and departmental course schedule updates aided the student regarding departmental expectations and offerings.) Biology instructors usually indicated what prerequisites were necessary for a specific course, the instructor's recommendation for stated prerequisites for a course was discussed generally within the department. The Biology Department (which respondents perceived as "democratically organized") had frequently discussed the number of courses offered requiring a prerequisite. One respondent noted that a course proposal which required too many prerequisites would be likely to be considered as more appropriate for graduate students than undergraduates. Prerequisite requirements were used, moreover, to discourage enrollments of inappropriately prepared students in upper level courses (although one respondent noted that prerequisite requirements had been waived when students showed evidence of being able to handle the work without having had the designated prerequisites).

In summary, respondents from the Biology Department thought that enrollment considerations influenced decisions regarding course additions (2.1), and substantive course modifications (2.1). Enrollment considerations did not influence change in the other variables to the same degree. The following ratings were given to these variables: deletion of courses (1.6), change in numbering (1.3), in description (1.3), in area/sequence designation (1.3) in titles (1.0), in credits for majors (1.0), and in courses without prerequisite requirements (1.0). Moreover, these respondents noted that things tend to be added to the biology curriculum "piece meal."
For that reason the department evaluated its curriculum periodically, as department members asked themselves if they were providing the kind of education students should have. Finally, one said, "We're a relatively conservative and stable department; so we don't have a lot of changes."

Thus, in relation to this research, respondents from biology indicated that there was only one area where trends in students' pursuits had an influence in their decisions to change. When adding new courses or making substantive modifications in courses, student interest and potential student demand was a consideration in decisions to change. Other concurrent considerations were faculty interests, faculty expertise, departmental resources, available space, and educational merit. The Biology Department's concerns with student enrollments and majors appeared to be more in the area of managing large numbers of students in practical, educationally sound ways.

Psychology. According to the three respondents from psychology, students had participated in Psychology Department curriculum discussions throughout the decade, with some students described as being more helpful than others. Moreover, student participation was described as irregular and influenced by the fact that there were "more of us [faculty] than them" on the Psychology Department's curriculum committee.

The Psychology Department rated student evaluations (2.3) and faculty feedback (2.3) as the contexts most useful for receiving information about student's concerns. Student activities like clubs or honorary fraternities (2.0), sitting on committees with students
(2.0), and in casual associations with student friends (2.0) were rated as somewhat useful. Academic advising (1.6), student organized social or sports gatherings (1.6), student publications (1.6) the classroom (1.3), and entertaining students in one's home (1.0), were not rated as useful contexts for acquiring information about student's concerns.

Respondents from the Psychology Department varied in their recollection of discussions involving an increase or decrease in the numbers of majors. One said, "We recognized that what happens in the introductory course, for example, ultimately impinges on how many majors there are." Another said that the department discussed the number of majors "lots of times" particularly when the department had tremendous enrollments and thus majors. "I think we are responsive to student input in both what they say and their patterns of enrollment. Anyway you slice it that's got to be the bottom line. The new ball game is accountability and the state FTE situation."

All respondents read information about trends in student majors, some of which they acquired from colleagues at other colleges and universities, from book publishers (concerning how big certain markets were), and from internal sources. One respondent said that they kept track themselves of trends in student majors. Interestingly, another respondent noted, "you never really know what the variables are that influence the number of kids in class and in . . . concentration."

These respondents viewed the College-wide move to allow double majors for undergraduates as resulting from students wanting more concrete credentials to aid them in a tight job market. One
respondent thought, however, that some departments (with smaller student demand) viewed the double major as a way to bolster their dwindling enrollments. Respondents from the Psychology Department expressed indifferent support for the move to double majors, generally saying that they didn't think the extra major did students that much good. Minors were viewed as resulting from the same credentialing phenomenon. Finally, all psychology respondents indicated that they had not supported the College-wide move to allow minor concentration.

When courses were proposed for the psychology curriculum, the frequency with which they were ultimately offered was a function of regular program scheduling requirements, student interest or demand, faculty availability, and demands of the psychology graduate program on teaching loads. Students did comment on the availability of alternating or occasional courses, a reflection of students' scheduling problems. One respondent noted that scheduling in the Psychology Department was difficult, with many course offerings "pretty well locked in." Moreover, enrollments were cited as an influential factor affecting the number of sections of a course offered as well as whether a course was offered every year or every other year.

Class sizes, since 1975-76, have been set in the Psychology Department in accordance with the level of the course and the size of the room. Lower level classes are large; intermediate level courses, medium-sized; and upper level courses, small. Prior to 1975, respondents described the departments courses as heavily subscribed. Further, one respondent noted that some in the department thought that
teaching large sections was not going to help gain extra positions for the department. Also, the perception that larger class sections were not educationally valuable resulted in a massive, "systematic" renumbering of courses with concurrent limitations placed on class sizes at different levels. Students complaints about large classes were cited as contributing to the decisions to renumber and place size limitations on classes. Since the renumbering, students had had much less to say on the subject. Two of the Psychology Department's respondents thought that enrollments contributed to decisions about class size, particularly in the aforementioned renumbering.

The following graphs in Tables 3 and 4 reflect curriculum adjustment trends and student enrollment trends for the Psychology Department during the decade.

In graph 3A, Aspects of Appearance, the Psychology Department shows few changes in numbers, titles, and descriptions from 1972-73 to 1975-76. In 1976-77, however, the Department made a total of 57 changes in numbers, titles, or descriptions. After that, few changes occurred in this aspect of the psychology curriculum. In graph 3B, Aspects of Opportunity, only slight change occurred: for example, four courses were added to the curriculum in 1975-76, and credit requirements for majors changed twice (in 1974-75 and 1979-80). The Department began the decade with a requirement of 30 credit hours for majors, changed it to 27 hours in 1974-75 and finally to 32 hours in 1979-80. In graph 3C, Aspects of Accessibility, only a slight change shows here as well. The Psychology Department tended to decrease the number of courses with area/sequence designations from 1973-74 to
Figure 3

Trends in Curriculum Change - Psychology

A. Aspects of Appearance*

B. Aspects of Opportunity**

C. Aspects of Accessibility***

* Aspects of appearance represents trends in changes in course numbers, titles, and descriptions.

** Aspects of opportunity represents trends in course additions, deletions, and modifications and changes in credit requirements for majors.

*** Aspects of accessibility represents trends in the area/sequence designation of courses and in the number of courses without a prerequisite designation.

(See Chapter Three, "Classification and Presentation of Data," for a full explanation of how these data were compiled and presented in graphs. For all curriculum change variables, changes were calculated using 1971-72 as a base year.)
Figure 4

Trends in Curriculum Change - Psychology

A. Headcount Enrollment

B. Majors Granted
1975-76, (from 18 courses in 1973-74 to 14 courses in 1975-76), then increase them slightly again to 21 courses from 1978-79 to 1980-81. At the same time, the number of courses without a prerequisite designation decreased. In 1971-72, six courses could be taken without having had a prerequisite, and by decade's end there were only two courses.

The student enrollment graphs for the same period show an increase in the number of students taking psychology courses (over 1900 in 1971-72, 2898 in 1975-76, 2040 in 1979-80, and 2305 in 1980-81). The number of majors increased, for the most part, over the decade, (from 59 majors in 1971-72, to 102 in 1979-80 and ending with 68 in 1980-81).

The respondents were asked at this point about the reasons for the specific changes that produced the effects depicted in the graphs. Respondents said that the massive renumbering of course in 1975-76 represented an attempt "to rationalize" the curriculum, by making a logical sequence of course offerings. This logical sequence would reflect departmental expectations for students. In short, respondents described the renumbering as an effort to have a coherent system. Respondents indicated that the numbers were designed to help students, but noted as well that students rarely, if ever commented on the numbering of courses. Numbers were changed neither to encourage nor discourage enrollments.

Some titles and descriptions were changed in conjunction with the renumbering since a basic re-organization of the psychology curriculum had taken place. Some changes in course titles and descriptions
reflected changing trends, course content, and faculty interests. Title and description updates became necessary for accuracy. One respondent noted that a change in course description (indicating the separation of lecture and lab - the lab becoming optional) was to encourage enrollments in the lecture section. Although respondents could recall no instances of students suggesting the need for changes in either titles or descriptions, these changes occurred in hopes of making things clearer to students. Where neither titles nor descriptions of some courses changed over the decade, respondents thought that changes in the field, in texts, and in teaching approach did change. Titles and descriptions were not changed primarily to encourage or discourage enrollments (although one respondent noted that one or two changes might have occurred with that in mind).

Courses were added or substantively modified in the psychology curriculum when new faculty arrived, as faculty interests changed, when the department reconsidered its program needs, and when students requested certain program emphases. Respondents recalled no difficulties in getting students to take new courses, but one noted that "students will avoid a new professor like the plague." Some courses in the psychology curriculum came about, in part, from student suggestions and requests. Further, courses were added to attract more and different kinds of students, a function of the department's need for courses to serve as "sequence soppers" (e.g., courses that will accommodate students fulfilling sequence requirements) and of faculty interest in an area.
The Freshman Seminar was the only course actually dropped during the period. Courses were not dropped during the decade due to low enrollments: "That would be bad politics and bad psychology." But courses were made a requirement as a result of low enrollments. Here, respondents indicated that no one would take statistics or the advanced experimental labs if the department did not require them.

Changes in credit requirements for psychology majors occurred twice during the decade. Respondents viewed the first change as a response to the pressures of the times. The late 60's were perceived as times when pressures existed for student oriented, freer curricula. Credit requirements for psychology majors were lowered at the time to reflect that orientation. Later, requirements were increased when faculty perceived the need for better preparation and a sounder foundation for psychology majors. Two respondents also noted that when increasing credit requirements for majors, the Psychology Department was also attempting to remain in line with other Arts and Science department's requirements. "One underlying current [in the increase in credit requirements] was to discourage those who wanted an easy major." This stance resulted from receiving too many frivolous double majors. One respondent noted, in contrast, that the view of what credit requirements for majors did or should do in regard to encouraging or discouraging enrollments varied significantly from one faculty member to the next. Two believed that no connection existed between requirements and enrollments, while one disagreed. Respondents did recall students suggesting the need for a change in credit requirements for majors.
The number of courses with area or sequence designation increased over the decade as a result of adding courses to the psychology curriculum. Only two courses filled area requirements. Courses with sequence designation were designed to give a general display of some aspect of the discipline. Students rarely commented about area or sequence designations. Moreover, courses were not designated area or sequence to make more courses accessible to students. According to one respondent, in the early years of negotiating area/sequence designations, people did, in part, try to insure that they had their share of students. Since then, the pattern for area/sequence designation had become relatively well established.

Prerequisite requirements were proposed by individual faculty members and then discussed by the department as a whole. Prerequisites function to insure adequate student preparation as they progress through the department. Student comments about prerequisites appear to have stemmed mainly from their desire to take Abnormal Psychology without having had the two introductory courses. (Psych. 201-202 are prerequisites for all psychology courses; however, exceptions can and have been made by the concurrent permission of the professor and department chairman.) Interestingly, faculty both inside and outside of the Psychology Department cited Abnormal Psychology as a perennially popular course among students. Respondents indicated that prerequisites may have discouraged the merely curious student.

In summary, respondents from the Psychology Department rated the influence of enrollment considerations on their decisions to change
the curriculum as follows: enrollments were considered somewhat (2.0) in decisions about titles, descriptions, additions, and substantive modifications. In numbering (1.6), credit requirements for majors (1.5), deletions (1.6), area/sequence designation (1.3), and prerequisites (1.0) enrollments were considered only slightly if at all. In other remarks, one respondent noted that the department perceived many of their students as going on to seek the Ph.D. This respondent said that the department felt a responsibility to prepare their students for advanced study within breadth of subject matter as well as depth. This was a major consideration in the re-organization of the psychology curriculum in 1975-76. The faculty believed that they had, at that point, more students than they could handle. To wit:

After looking at faculty teaching loads (that is, higher enrollment), we chose to reduce class size. We figured either the students would really want these courses and complain to us or the Dean and we might be able to increase our faculty or they would find other courses and our teaching loads would become more reasonable (in either case).

**Philosophy.** In the Philosophy Department, students participated in the department's curriculum committee. Two of the three respondents from philosophy viewed student participation as active and useful, while one viewed overall student behavior as generally quiet. This particular respondent indicated that it took an extraordinary kind of student to be assertive enough to be heard, although occasionally such a student would appear.
Respondents from the Philosophy Department rated student evaluations (2.6) as the most useful context for receiving information about students' concerns with the curriculum. Other useful contexts were academic advising, sitting on committees with students, entertaining students in one's home, casual associations with student "friends," student publications, and faculty feedback (all rated 2.3). Class and student activities, like clubs or honorary fraternities, were less useful (2.0). Student organized social or sports gatherings were rated as not at all useful (1.0) in acquiring information about students' curricular concerns.

The Philosophy Department faculty discussed the numbers of majors during the decade, particularly when the department reached a point of having too many majors who were perceived as not serious about their work. Respondents thought that the double major option was a partial influence in the decreasing quality of their candidates for concentration. Therefore, the department increased the concentration requirements slightly "with the desired consequences of reducing the number of majors." These respondents indicated that double majors came about from the students' desire for credentials (as they considered economic and employment opportunities) as well as from the faculty's view that the students education could be broadened by the double concentration. Philosophy, in the view of some respondents, combined well with numerous other majors (both applied or not) and offered students an opportunity to broaden their perspective. Respondents supported the College-wide move to double majors and to minors. Minors, these respondents indicated, came about as a result
of too many "not serious" majors (e.g., students who were not taking their second choice of major as seriously as their first) as well as from the student desire for credentialing.

In the Philosophy Department, the frequency of course offering during the decade was influenced by a combination of student interest, faculty interest, and a broad conceptualization of what the philosophy curriculum should be. In more recent years, the department had become more systematic and regular about course scheduling. This was, in part, a function of the department's change in approach to the discipline for concentrators. As requirements became more structured, so did scheduling. Respondents recalled students wanting courses offered more regularly. These respondents indicated, however, that student comments did not really influence the department's decision to make course scheduling more regular.

Class sizes were set as the department enrolled the maximum number of students that the faculty thought they could handle while still doing "a respectable job." Balanced against this notion was "the perception that we have to do our fair share in carrying the student load." One respondent indicated that "the overall student load we have to carry to justify the nine positions we have in the department" when juxtaposed against educational considerations, forced "agonizing choices." Smaller courses tended to be offered less frequently, but they also were usually more specialized courses. Lower level courses were offered regularly independent of size. Students tended not to like large philosophy classes, since discussion became difficult under such circumstances. Students comments were not
thought to influence significantly the departments' decisions about class size, except to "confirm us in our intention." "The desire to have a respectable enrollment does increase our (class) size," noted one respondent. At the same time another said, "I think people are aware that dealing with philosophy . . . requires a different kind of educational setting than some other things might." Another described the tension as one between ideals and realities.

The graphs in Figures 5 and 6 reflect curriculum adjustment trends and student enrollment trends for the Philosophy Department.

In graph 5A, Aspects of Appearance, depicting change in numbers, titles, or descriptions of courses, the Philosophy Department changed more of these in the first half of the decade than in the last. From 1972-73 to 1976-77, twenty-two course numbers, titles, or descriptions changed. After that, change in this curriculum aspect was slight. In graph 5B, Aspects of Opportunity, the department made adjustments on a yearly basis. Ten courses were added to the philosophy curriculum between 1973-74 and 1976-77; and from 1977-78 to 1980-81 one or two new courses were added each year. Twenty seven credits were required of philosophy majors in 1971-72, a requirement that did not change until 1980-81 when the requirement was raised to thirty. In 5C, Aspects of Accessibility, the graph shows a number of changes: area/sequence courses numbered thirty-one in 1971-72 rose to a high of forty in 1978-79, and the decade ended with thirty-seven courses carrying this designation. Courses without prerequisite requirements numbered twenty-one in 1971-72 and gradually decreased to ten in 1980-81. The cumulative effect of changes in this third curriculum
Figure 5

Trends in Curriculum Change - Philosophy

A. Aspects of Appearance*  B. Aspects of Opportunity**  C. Aspects of Accessibility***

* Aspects of appearance represents trends in changes in course numbers, titles, and descriptions.

** Aspects of opportunity represents trends in course additions, deletions, and modifications and changes in credit requirements for majors.

*** Aspects of accessibility represents trends in the area/sequence designation of courses and in the number of courses without a prerequisite designation.

(See Chapter Three, "Classification and Presentation of Data," for a full explanation of how these data were compiled and presented in graphs. For all curriculum change variables, changes were calculated using 1971-72 as a base year.)
Figure 6
Trends in Student Enrollment - Philosophy

A. Headcount Enrollment

B. Majors Granted
aspect is evident as the graph depicts yearly adjustments.

Student enrollments in philosophy courses numbered almost 1300 in 1971-72, increased during the decade to a high of just over 1700 in 1979-80, and ended at approximately 1670 in 1980-81. Philosophy majors numbered twenty-two in 1971-72, grew slightly in number until 1974-75, then dropped to fifteen in 1975-76. Subsequently, the number of philosophy majors climbed to a high of 45 in 1980-81. Thus, the two graphs depicting students' pursuits in philosophy show (with the exception of the number of majors in 1975-76) increasing numbers of students in the department over the decade.

The three Philosophy Department respondents were asked at this point about the reasons for the specific changes that produced the effects depicted in the graphs. They said that changes in course numbering in the Philosophy Department represented attempts to reflect the nature and level of a course as emphasis, expectations, and course formats changed. Respondents indicated that they wondered how course re-numberings would affect students (Would it encourage or discourage enrollment?) But, the department's primary consideration was one of reflecting course expectations accurately. The respondents also recalled that some courses had been "numbered for wider appeal". Furthermore, students did not suggest renumberings in the respondents recollection.

Titles and descriptions were changed to maintain "truth in advertising," as teachers, emphases, and course organization changed. Respondents indicated that they did consider the students perspective on course titles and descriptions, but also recalled no incidence of
students suggesting the need for title or description changes. Two respondents thought that courses whose titles or descriptions had not changed over the decade, changed nevertheless, in order to reflect changes in the discipline, the teacher, the texts, or the teaching approach. These respondents indicated that many of these uncatalogued changes, were substantially influenced by what students said to them about their courses. Each one suggested that they as individuals and the department, as a whole valued and responded to students perceptions. Moreover, respondents did not think that titles or descriptions were changed to encourage or discourage enrollments.

Courses were added or substantively modified in the philosophy curriculum when new faculty came, faculty interest changed, or emphasis in the field or the department shifted. The Philosophy Department usually had no difficulty getting students to take new courses. Some additions occurred at the suggestion of students, and in response to popular or current topics. When asked if courses were added to attract more or different kinds of students, one respondent said, "That's always a factor." But he went on to say that since the department generally turned students away, it was more a question of trying to attract certain kinds of students. Another said, "We've been luckier than most Philosophy Departments in the country, without having to buy people."

Only one course was recorded as formally dropped from the philosophy curriculum during the decade, although respondents indicated that some things quietly slipped away from the curriculum, or may have become parts of other courses. The Freshman Seminar
folded due to "manpower considerations," and until recent years a number of courses existed in the catalog that were offered infrequently. Low enrollments would be a consideration in dropping (or ceasing to offer) courses, according to two respondents, but not the primary consideration. Finally, no respondent recalled a course being made a requirement due to low enrollments.

As stated earlier, credit requirements were changed in the Philosophy Department to discourage those who would casually take philosophy just to have it on their transcript. Credit requirements were also changed to prepare concentrators properly in the field. The credit requirement change touched off a debate in the department over the merits of loosely structured programs versus more tightly structured ones. Traditionally, the Philosophy Department had favored a looser structure. Respondents indicated that the credit requirement change toward more structure was, in part, intended to discourage casual enrollments. One respondent suggested that the change reflected the "permissive 60's vs. the impermissive 80's."

Area and sequence designations increased over the decade as a result of adding courses to the philosophy curriculum. One respondent noted that there were no real policy reasons for the increase, since "area/sequence is just like gravy; you can put it on everything...." Students rarely, if ever commented on area/sequence designations. The increase in area/sequence courses was not effected to make more courses accessible to students filling general education requirements.

Prerequisite designations in the Philosophy Department came about through discussion between an instructor and the department as a
whole. Prerequisite requirements increased significantly over the decade to increase the rigor of the program, and insure appropriate student preparation in keeping with faculty expectations for certain course levels. Respondents indicated that seeking a quality program and discouraging the less serious, less prepared student represented the aims of the Philosophy Department as they increased prerequisite requirements.

In a summary comment, one respondent indicated that enrollment considerations did not influence decisions to make changes in any of the six variables. The other two respondents suggested that in the areas of course additions, substantive modifications, and number changes, enrollments were somewhat (2.0) of a consideration. In brief, change was only slightly if ever influenced by enrollment considerations in the Philosophy Department. The remaining variables were rated by these respondents as follows: change in titles (1.5), in descriptions (1.5), in course deletions (1.5), in credit requirements for majors (1.0), in area/sequence designation (1.0), in prerequisite designation (1.0).

Thus, for the Philosophy Department educational considerations received primary consideration in decisions to make the curriculum changes examined in this research. There were only two areas where the more pragmatic consideration of student enrollments were cited as having influenced the department's decisions. When adding courses to the curriculum and when re-numbering some courses, two of the three respondents indicated that student enrollments had been a consideration in their deliberations.
Professional Schools

The School of Business Administration. According to the eight people interviewed from the School of Business Administration, undergraduates did not participate on the undergraduate curriculum committee during the decade. One respondent cited students remarks as usually "ill-informed, unqualified, emotional, passing comments." Another said, "I don't think my colleagues here value the student opinion that greatly." When business school respondents did receive information regarding students' curricular concerns, they rated the most useful contexts as faculty feedback (2.5), casual associations with student friends (2.4), and in the class room (2.4). Respondents rated as less useful, student evaluations (1.8), academic advising (1.6), student activities like clubs or honorary fraternities (1.5), sitting on committees with students (1.5), student publications (1.4), student organized social or sports gatherings (1.2), and entertaining students in one's home (1.2). (Several respondents noted that there had been a time when student evaluations were more useful due to the depth and detail once gleaned from a computer tabulated evaluation form. Costs in recent years had made further use of the form prohibitive).

Respondents indicated that there had been informal discussion in recent years regarding the increasing numbers of majors going through their undergraduate programs (management and accounting). One said, "We are substantially understaffed. We generate sixteen more positions under the state funding formula than we've been given."
There have been substantial reductions in the number of undergraduates in education courses without a substantial reduction in faculty. Part-time business faculty were used as a result; and one respondent cited the business school enrollment policy as one of "bending backwards to guarantee a seat in a business course to an undergraduate in any discipline on this campus." The majority of respondents had kept up with trends in student majors over the decade through internal information as well as external (e.g., colleagues at other schools, national and professional association studies). Most respondents supported the Arts and Sciences move to allow double majors and minors. (One respondent, however, strongly opposed both options and argued against ever allowing either option to impinge on business school programs.)

The Associate Dean for Undergraduate Programs scheduled courses and course frequency. He based his decisions on the staff available as well as the requirements of the American Association of Collegiate Schools of Business (A.A.C.S.B.). The Dean also scheduled electives based on the aforementioned as well as student demand. Respondents recalled frequent student comments indicating a desire for more courses as well as more frequent elective offerings among existing courses. But respondents thought that actual demand had influenced course frequency more than had student comments. Similarly, enrollments were "the starting place" in decisions about course frequency in conjunction with A.A.C.S.B. requirements.

The associate dean also regulated class size, which in turn was a function of room size, demand, and needs of certain classes.
Accounting sections tended to be smaller than some others because of the nature of the material handled in the course. In contrast, one respondent recalled that oversubscribed sections in other courses had been held in an auditorium. Respondents indicated that course level had little influence on decisions about class size, but that course frequency did. While, respondents did not recall much student comment about class size (except that two respondents recalled students liking the relatively smaller classes in the business school in contrast to some Arts and Sciences departments), they did think that enrollments affected class size decisions. One noted "a tendency to allow class size to grow to accommodate as many [students] as possible" as "students vote[d] with their feet."

The graphs in Figures 7 and 8 reflect curriculum adjustment trends and student enrollment trends in The School of Business Administration.

Graph 7A shows slight changes in Aspects of Appearance during the decade (e.g., four in 1973-74, one in 1974-75, three in 1976-77 and 1977-78, and one in 1979-80). In 7B, Aspects of Opportunity, again changes were slight, with one or two course additions or modifications occurring each year between 1976-77 and 1979-80 and five courses additions in 1980-81. Credit requirements for business majors changed only slightly to reflect the fact that management concentrators had two less elective courses in 1980-81. Accounting concentrators had one elective course added in 1972-73. In 7C, Aspects of Accessibility, area/sequence designation changes are not represented since business courses do not carry this notation. The number of
Figure 7
Trends in Curriculum Change - Business

A. Aspects of Appearance* B. Aspects of Opportunity** C. Aspects of Accessibility***

* Aspects of appearance represents trends in changes in course numbers, titles, and descriptions.

** Aspects of opportunity represents trends in course additions, deletions, and modifications and changes in credit requirements for majors.

*** Aspects of accessibility represents trends in the area/sequence designation of courses and in the number of courses without a prerequisite designation.

(See Chapter Three, "Classification and Presentation of Data," for a full explanation of how these data were compiled and presented in graphs. For all curriculum change variables, changes were calculated using 1971-72 as a base year.)
Figure 8

Trends in Curriculum Change - Business

A. Headcount Enrollment

B. Majors Granted
courses without prerequisite requirements numbered ten in 1971-72, decreased to nine for several years, and returned to ten in 1979-80.

The graphs for student enrollment trends depict steady increases in the number of students taking business courses and pursuing business majors. In 1971-72, there were approximately 1800 students enrolled in business courses; and by 1980-81 there were over 4400. Similarly, in 1971-72 the number of business majors numbered 87 and by 1980-81, they numbered 196. The School of Business Administration thus showed significant increases in students enrolled in courses and pursuing a B.B.A.

The eight respondents were asked at this point about the reasons for the specific changes that produced the effects depicted in the graphs. There were no course renumberings recorded for the seventies in the business curriculum. Respondents suggested that course numbers in business existed largely as a matter of historical precedent with there being "no rhyme or reason" in the numbering system. Others suggested that even though this was the case, there was no reason to change course numbers, particularly since such a change created headaches for the Registrar. No one recalled students mentioning a need for the renumbering of any course.

Titles and descriptions were changed to reflect variations in teaching approach, course content, faculty interest, or in faculty composition (either from retirement or the addition of new faculty). Also courses were occasionally updated by the associate dean (without necessarily going through any procedure) to keep the catalog current. Respondents indicated that they did not consider how title changes
would affect students, but that they did consider how changes in course descriptions would affect students. Here the consideration was one of giving students an appropriate perception of the course. Students rarely, if ever, suggested the need for either title or description changes for a course. Respondents thought that courses showing no title or description change over the decade had probably changed anyway due to changes in the field via new techniques, and new technologies. Respondents also indicated that it would be a rarity for students' comments to influence the aforementioned kinds of curricular adjustments in business. Enrollments were not a consideration in title or description changes in the respondents' memory, except in the occasional case of an elective course where there was "a tendency to try to make it as appealing as possible to as broad based a group as possible."

Courses were added to the business curriculum as a result of new faculty, retiring faculty, change in teaching emphasis (either individually or in a subject area), popular national issues or topics, and accreditation requirements. If the new course was required, there was no difficulty in getting students to take it. Respondents recalled, however, that "it takes a while to build up an elective and build up a reputation." In contrast one noted that "generally what we do is require it; then they have to [take it]." Another said of electives, "I think you always start off like that [slowly] and therefore we always give them prime hours...[a] merchandizing technique to get people to try them." When asked if courses were added or substantially modified at the suggestion of students, most
said no. One said, moreover, "that's a chicken and egg thing. [I]f . . . a faculty member wants to teach [a course] and he talks to some students and asks them if they'd like to have this course and they say 'yeah, yeah,' then they come to see [the associate dean]."

Respondents indicated that courses were not added to attract more or different kinds of students. "We don't need more," one said.

Only one course was recorded as dropped during the era, and no one could remember why. One said, "It's tough to drop a course." It seemed easier, according to respondents, to keep courses in the curriculum, particularly due to difficulties inherent in adding a new course.

Credit requirements for business concentrators changed only slightly during the decade: management concentrators had three more hours of required courses, and accounting concentrators three less at decade's end. Some described the changes as in keeping with accreditation standards or with state licensing laws for accountants. Others suggested a need for more flexibility in credit requirements, noting that requirements had changed little. One suggested that some jockeying of credit requirements was a "power play" on the part of the faculty. Respondents recalled comments from accounting students over the rigidity of requirements. Lastly, all indicated that credit requirements were not changed to attract more or different kinds of students.

Business courses carried neither area nor sequence designations during this period. (Only Arts and Sciences courses can carry area/sequence designations.) One respondent indicated that the
absence made scheduling "tight" for students (since students must fulfill 60 hours of Arts and Sciences requirements, to include area/sequence requirements and 60 hours of business). Students did not comment on the absence of area/sequence designations, on business courses. But one respondent thought that there was a secondary effect to the absent notation: "The students read very clearly the way Arts and Sciences people feel about us. You can't miss that!" (Here, the implication was that Arts and Sciences faculty wanted people to see a clear difference between Arts and Sciences programs and business programs.)

Individual faculty, in conjunction with the undergraduate curriculum committee and the associate dean of the undergraduate program, decide about course prerequisites. The major concern here was the appropriate preparation of students for certain courses, with little or no consideration given to either encouraging or discouraging enrollments. In summary, respondents indicated that enrollment considerations influenced decisions to add courses (2.4) to the business curriculum more than for the other variables of change. In these ratings, course modifications (1.7) and changing descriptions followed (1.6). After that the respondents rated the remaining variables as follows: changing credit requirements for concentrators (1.5), deletions (1.2), prerequisites (1.2), and course numbering (1.0).

In other comments, respondents from the Business School reiterated that the primary factors impinging on any of their curricular decisions were faculty resources and accreditation
requirements. One respondent also said, "We have an outside constituency [in business and industry] with whom we frequently communicate." In turn, business faculty adjust some of what they teach to the needs of that constituency. In the view of some respondents, this also represented more direct feedback than that received by faculty in subject areas without such a constituency. Because of these external considerations and their own experiences, one respondent said:

I feel that the student should have as much business as possible. If we don't require that they take business electives then they tend not to take business electives. They tend to take electives in the arts and sciences which is okay, depending on how they choose them. If they choose related electives like economics . . . or computer science . . . [it] does a great deal to supplement the business area.

Finally, one respondent underscored the tension between the Business School and the Arts and Sciences faculty, noting that the decade of the seventies began with stains remaining from the "bloodletting" that occurred at the school's formation in 1968. Echoes of that re-organization debate still remain. Many respondents in both professional schools and in arts and sciences departments made reference to the differences that are perceived to exist between the professions and traditional academic disciplines. Reverberations of the debate surface whenever members of the college community question the meaning and place of knowledge acquisition versus application, of breadth of study versus depth of study, of theory versus fact, of the ideal versus the practical. Strong opinions persist at William and Mary on the many aspects of these issues.
The School of Education. Eleven respondents were interviewed from the School of Education. They said that undergraduate students did not participate on the School of Education curriculum committee during this period. Respondents recalled neither asking students to participate nor students asking for a voice on the committee. When respondents did receive information about students concerns, the most useful contexts for acquiring it were rated as student evaluations (2.4) and faculty feedback (2.3). Respondents rated in class and in casual associations with student "friends" (1.9) in academic advising (1.7) and on committees (1.6) as somewhat useful and all other contexts as not very useful for acquiring information about students' concerns [e.g., in entertaining students in the home (1.4), in activities like clubs or from the Flat Hat or student publications (1.3), and in sporting activities (1.2)].

All respondents but one indicated that the School of Education discussed the changing number of majors. Discussion in recent years had been oriented toward ways to increase or at least to maintain the number of majors. But several respondents noted that these things were cyclical, since discussions had once focused on problems of too many students. Respondents viewed most of the seventies as a time when the School emphasized "conserving enrollments." One respondent said that the decade had been a time of, "trying to promote the program in different ways . . . [so that] we looked healthy." Moreover, toward the end of the decade, the School of Education lost its program for majors in Secondary Education, a result of too few students. One respondent noted "if they (The State Council for Higher
Education in Virginia, S.C.H.E.V.) tell you you've got to tighten your belt and throw off excess baggage, you throw off what really doesn't make any difference. It's a political kind of thing..." In that regard, several respondents cited an increasing concern about enrollments and FTE's over the ten year period. Most of the respondents said that they read information on trends in student enrollments from professional associations, national statistics, and from internal college sources. One respondent said that he witnessed the trend at William and Mary by attending graduation and watching "half the student body stand up for degrees in business!" In yet another view, one respondent said, "You can't attend a conference...[without hearing]...who is still employed and who is not."

The School of Education had no vote in the decision to allow students to have double majors. All respondents indicated that they supported the move to double majors just as they later supported the move to allow minor concentrations.

Frequency of course offerings in the School of Education represented attempts to balance student demand with faculty interest and to balance teaching loads with certification and graduation requirements. Increasingly throughout the decade the Dean of the School of Education structured many of the decisions about course frequency in consultation with the faculty. Usually, how often a new course would be offered came as part of the course proposal. One respondent candidly stated, "There are some courses that are done because people have tried to spread their...foundation in terms of their own job security. I know a couple of people...who have
built courses in the undergraduate program to increase their FTE's."
How often those courses were scheduled, in turn, depended on how often
they achieved "basic minimum enrollment."

Six of the respondents recalled little or no comment from
students regarding course frequency. The other five recalled comments
related to scheduling problems or the desire for certain courses to be
offered more often. Of those who recalled student comments regarding
this issue, some said that students' comments had influenced decisions
in their own subject areas. But others said that students' comments
had not influenced them. All respondents indicated that enrollments
had affected the frequency of course offerings. If one taught a
popular course, then there was pressure to teach it more often. By
the same token, since the school's mission involved certifying
teachers, if only a few students needed a course to graduate (and meet
certification requirements) then usually the needed course(s) would be
scheduled and taught.

Class sizes were based on four considerations: 1) The
recommendation of the faculty member teaching the class; 2) the
educational needs of a particular course; 3) the number of students
needing the class to graduate, and 4) the Dean's recommendations.
Interestingly, some respondents indicated that establishing class size
was a faculty prerogative, while some indicated that it was the Dean's
prerogative. One respondent noted that the level of the course
affected decisions made about class size because different course
levels equate to different numbers of FTE's in the state formula for
resource allocation. Other respondents recalled only infrequent
mention of course level in equally infrequent class size discussions in the school. Most agreed with one respondent who said that it was better to "have one class with nine than two with three and six [students]."

Respondents recalled few comments from students about class sizes except from some who had objected to the large numbers of students in Educational Psychology sections. Education majors were cited as complaining of too many non-majors crowding the classroom, who were not interested in learning the same things. The Educational Psychology course in size and format also represented a popular tradition at the college. One respondent who had taught the course said, "I was hired knowing that was the game . . . that they were looking for someone to teach larger classes. . . . And we have continued the tradition for the fifteen years I've been here." When asked if enrollments contributed to decisions made about class size, over half of the respondents said yes. One said, "I think some classes were FTE supporters," while another noted that it would be difficult in some cases to know which came first, an enrollment trend and then a class size decisions or the reverse.

The graphs in Figures 9 and 10 reflect curriculum adjustment trends and student enrollment trends for The School of Education.

In graph 9A, Aspects of Appearance, changes in numbers, titles, or descriptions occurred as follows: four in 1974-75, two in 1975-76, three in 1977-78, two in 1979-80, and one in 1980-81. In graph 9B, Aspects of Opportunity, a number of changes emerged: Five courses were deleted from the undergraduate catalog in 1973-74: three course
Figure 9
Trends in Curriculum Change - Education

A. Aspects of Appearance*  B. Aspects of Opportunity**  C. Aspects of Accessibility***

* Aspects of appearance represents trends in changes in course numbers, titles, and descriptions.

** Aspects of opportunity represents trends in course additions, deletions, and modifications and changes in credit requirements for majors.

*** Aspects of accessibility represents trends in the area/sequence designation of courses and in the number of courses without a prerequisite designation.

(See Chapter Three, "Classification and Presentation of Data," for a full explanation of how these data were compiled and presented in graphs. For all curriculum change variables, changes were calculated using 1971-72 as a base year.)
Figure 10
Trends in Student Enrollment - Education

A. Headcount Enrollment

B. Majors Granted
were added between 1974-75 and 1975-76, eleven course were added in 1978-79; and seven more were added between 1979-80 and 1980-81. Credit requirements for education majors also changed during the decade. The requirement for elementary education majors' increased from twenty-seven credits in 1971-72 to thirty-three in 1973-74. The requirement for secondary education majors' increased from eighteen hours in 1971-72 to twenty-two in 1979-80. In Accessibility, no area/sequence designations were noted for education courses. The number of courses without prerequisite requirements totaled eleven in 1971-72, dropped to six in 1973-74, then rose to twenty-eight in 1980-81. Thus, for most of the decade, the trend was for an increasing number of courses without prerequisite requirements.

Graph 10A, which depicts student enrollments in education, shows undergraduate enrollments in education courses in 1971-72 to number approximately 1370. That number dropped between 1972-73 and 1973-74 to stay between 1040 and 1170, and rose in 1974-75 to over 1600. In 1975-76, education courses had over 2400 students enrolled, the highest number for the decade. After 1975-76 the number steadily declined to around 1200 in 1980-81. The number of education majors numbered eight-four in 1971-72, forty in 1974-75, increased to sixty-eight in 1976-77, and forty-six in 1980-81. Trends in student enrollments in courses and in the number of education majors appeared to fluctuate considerably over the decade.

Respondents indicated that course numbering changes of the 70's were influenced by certification needs (e.g., students' records needed to show that they had taken certain courses at certain levels in order
to be certified to teach in Virginia). They wanted course numbers to reflect accurately the level of a course. Also some course numbers were changed to allow graduate students to receive credit for undergraduate courses. (Courses were changed from 300 to 400 level to allow graduate credit). The School of Education did consider how renumberings would affect students, particularly in regard to certification needs. In contrast, respondents recalled little or no comment from students on the subject. Respondents indicated that renumberings, in part, were to encourage enrollments.

Course titles changed in the School of Education as a result of a change in certification requirements. Description changes also occurred in response to changing certification requirements as well as to broaden the possible target group of students who might be interested in a course. In the case of one course some respondents said that the description change represented an attempt "to get more juice" out of the same number of students. In this particular case, the course description reflected an addition to the credit hours students could receive for the course. One course description changed, because of a controversy over credit between the school and an Arts and Sciences department. The description changed to inform students that they could not count two courses on a similar topic toward graduation credit (even though one was an Arts and Sciences course and the other an education course). Respondents noted that they did consider the effect of changing titles and descriptions on students. The School of Education faculty wanted titles and descriptions to state clearly and accurately what a course was about,
in keeping with the language of the times in a particular subject area. Students, in comparison, rarely if ever suggested the need for title or description changes. Most respondents thought that even if the titles and descriptions of some courses had not changed, courses had nevertheless changed because teachers approached students differently, texts changed, the various subject fields changed, and faculty interests changed. One respondent said, "As society changes, so does education." Most thought that titles and descriptions were not changed with the idea of encouraging enrollments as a primary consideration. As one respondent added, "We had a better mechanism for that--inventing new courses."

In the first half of the decade, course additions tended to result from the addition of new faculty to the school. Respondents indicated that other factors influencing course additions throughout the decade were accreditation requirements, certification requirements, attempts "to pull our load" in FTE's, faculty interest, and as a result of faculty broadening their teaching bases. One respondent stated that in the latter half of the era, "the whole School of Education shifted from the attitude, 'we have been preparing teachers and counselors' to 'we are a service organization'." The shift, in turn, varied from one faculty member to another as each decided where other service needs existed that fell outside of traditional school settings. When courses were added, education faculty did not recall great difficulty in getting students to take the new courses. "Strong" faculty advising helped in filling some courses while others had been designed for a specific clientele.
Respondents indicated that any erratic enrollment problems surfacing when new courses were added apparently occurred in the absence of advising or a predetermined clientele. Courses were not added as a result of students' suggestions. Moreover, some courses were definitely added in hopes of attracting more and different kinds of students as the School of Education expanded its offerings beyond those for which it had traditionally been known.

Courses were rarely if ever dropped from the School of Education curriculum. "No one wants to drop a course," said one. "It's much easier to carry it on the books." Although the School of Education administration sent memos periodically asking for some "housecleaning," faculty did not like to delete courses, especially since they viewed the costs of keeping a course "in storage" as negligible. Since low enrollments apparently did not contribute to course deletions (courses that were deleted from the catalog, were not actually dropped from the curriculum since they could have been and frequently were offered at the graduate level), it seemed possible that some courses may have been made requirements due to low enrollments. Most respondents indicated that possibility, but only if state certification requirements were a concurrent consideration.

In the early seventies state certification requirements changed for elementary school teachers and education credit requirements for majors changed as a consequence. That event touched off a negotiation process of several years duration between the School of Education and the Educational Policy Committee of Arts and Sciences. The negotiation to allow students to count 33 hours of education toward
graduation (instead of the 27 permitted at that time) spanned two deans of the Faculty of Arts and Sciences and two deans of the School of Education. The School of Education continued to submit the proposed change to the E.P.C. and to debate the merits of the proposal until the E.P.C. lent their formal assent. The negotiation symbolized a long-standing debate at the college over the place of the professions in a liberal arts undergraduate program. Later in the decade, an increase in requirements for secondary education majors occurred to prepare students better in the face of changing secondary certification. Several respondents suggested that the raised secondary requirement also represented "turf building" on the part of some faculty. Several of the respondents thought that credit requirements were changed in hopes of encouraging enrollments; but the majority indicated that while "enrollments are always a concern in a period of decline", nevertheless credit requirement changes were not used as a primary mechanism for increasing enrollments.

Area and sequence designations are not placed on education courses, since the school remains separate from Arts and Sciences departments. One respondent noted that if education courses had area or sequence designations "we'd have so many students we wouldn't know what to do with them." Another said, "Students don't view education as prestigiously as other academic majors." He thought that this view was encouraged by the organizational separation and absence of area/sequence designation. Most respondents did not think, however, that the absence of the designation affected students views. Respondents recalled few, if any student comments on area/sequence
When a faculty member proposed new courses for the education curriculum, he or she indicated any prerequisites required. The number of courses in the School of Education that did not require a prerequisite increased considerably over the decade. This was a function of course additions and attempts on the part of some faculty to maintain flexibility among course offerings. Several noted that new faculty coming on board in the seventies often wanted to increase prerequisites and often met with opposition. Some of the explanations given for this were along the following lines: "The kids were in programs [where] advisors tell them what to do," eliminating the need for an intricate system of prerequisites. Another stated that so many variations occurred regarding prerequisite "rules" that when students had scheduling difficulties "rather than continuing to make exceptions to the rule . . . [it was easier to] . . . eliminate the rule." Prerequisites requirements were infrequently discussed in the School of Education. When prerequisites were discussed, it represented an attempt to insure appropriate student preparation and to encourage the academically serious student to enroll.

Enrollment considerations had the greatest impact on decisions to add courses to the education curriculum (2.8); next came changing credit requirements for majors (2.5), followed by course modifications (2.3), changing titles or descriptions (2.2), change in numbering (2.1) and change in the number of courses without a prerequisite requirement (1.7). Since deletions seldom occurred, most ranked this item as not at all influenced (1.0). In other remarks, education
faculty cited the "terribly political" nature of many curriculum considerations (colleagues would say to one another, "I'll support you in this if you'll support me in that." Another said:

I think a faculty vacillates in its own intellectual idealism and integrity. In a given period, it's operating more out of enrollment concerns—conserving and maintaining it. At other times, it's operating out of some impetus of . . . trying . . . to strive after excellence. . . .

Respondents said that more debate was likely to occur over adding something new to the curriculum than with regard to the other aspects of change. The other "housekeeping" concerns were depicted as "cut and dried" exchanges. Education faculty were depicted as paying more attention to their own areas of interest than to these routine kinds of changes. Education faculty were also described as being ever conscious of pulling a fair share of the FTE load required to justify their programs.
Chapter IV


4. One should note that students were asked, starting in the academic year 1981-82, to take three more courses -- one in each area -- to fulfill area/sequence requirements. This change in basic requirements stemmed, in part, from the studies and recommendations that were included in the 1979 Report of the Ad Hoc Committee to Review the Undergraduate Curriculum.


6. Figures compiled from HEGIS Form, NCES 2300-2.1A, Degrees and Other Formal Awards Conferred Between July 1 and June 30, 1971-72 to 1980-81.

7. The rating consisted of a three point scale to indicate the usefulness of ten contexts in receiving information about students concerns 1=not at all, 2=somewhat, 3=a great deal. See Interview Guide, Appendix B. The rating shown for each context represents an average of the ratings given by respondents in each group interviewed.

Chapter Five

Summary Discussion, Conclusions, Suggestions for Future Research

In classical treatments of organizations, the people who make decisions to change things behave as rational actors who weigh alternatives and their consequences before ultimately choosing the course that will benefit the organization most. In comparison, recent treatments of organizations suggest that the ambiguous purposes of some organizations in combination with the complex environments in which they operate make human decision processes look more like an accumulation of interested parties working with deadlines, standard operating procedures, solutions looking for problems, and problems looking for solutions. Describing these ways of allocating attention have been incorporated in theories of limited rationality, first presented by March and Simon and expanded later in March and his colleague's research. According to the theory, this phenomenon occurs as a partial result of the myriad of things that compete for the attention of an organization's members. People may attend to normal routines, rules, and operating procedures. They may also pay attention to more symbolic things like institutional or departmental reputation. In turn, with abundant incoming information, that information to which people ultimately pay attention is that which informs or influences their decisions.

The information to which people ultimately attend can influence all facets of an institution, affecting the ultimate adequacy of a chosen course of action, the seriousness with which others view the course, and the reputation or respect accorded to an institution by
its internal and external constituency. Further, the information which is usually used is determined by established routines, familiar traditions, and the like, even as that information contributes to the perpetuation of those same rules, routines, and traditions. Paying more attention to certain kinds of information than to others can result in behaviors that encourage people in their beliefs about who and what is important, and who and what behavior will bring the results desired. Imitative, rule following behavior is also known as single-loop learning behavior. Such behavior seemed evident in the undergraduate program of a small, prestigious, public liberal arts university in a sample review of regular institutional activities. In the three academic departments and two professional schools examined here, each group tended to maintain rules or routines within a basic housekeeping scheme. Changes occurred that were in keeping with established routines. Also, participants made changes in ways that were linked to their views of events, the significance of events, their place in events, and their ability to manage events perceived as relevant to them.

The channeling effects of accepted rules and routines were evident in all departments and schools: numbers, titles, descriptions, credit requirements, area/sequence designations (where applicable), and prerequisites designations provided frameworks for the adjustments made. Departmental and school precedent also played an important channeling role as people in their respective areas interpreted the significance of these framing devices for various kinds of curriculum adjustments.
Generally speaking when looking at grass trends in departmental and school curriculum changes over the decade, each sample group behaved according to the March-Simon theory. Those departments having the greatest numbers of students enrolled in courses and pursuing majors showed the least inclination to change; those with fewer students showed the most changes. Interestingly, and in contrast, some departments with adequate, consistent numbers of students nevertheless made significant housekeeping adjustments in curricula during the period. This, in turn, signaled some qualifications, ambiguities, and complexities of the broader behavioral view—exceptions that surfaced even in those groups whose behaviors supported the theory.

The broad behavioral perspective of March and Simon was useful, therefore, in inferring meaning in gross terms. Where organizational slack seemed evident, departments and schools enjoying the slack of abundant enrollments changed less. For those groups where slack was decreasing, change occurred more. When, however, the research focus included an examination of detailed accounts of what had informed decisions to change, different perspectives of the curriculum adjustments surfaced. Many things which had served to aid in sorting through incoming information as people made decisions became clearer. In turn, each group, tended to take on its own distinct characteristics as each sorted through the information deemed necessary. Further, the group effects were described as having emerged from on-going negotiations among individuals dealing variously with the rules, routines, procedures, and traditions of their own
areas of interest. Moreover, the broad behavioral perspective employed by Manns and March was neither confirmed nor disconfirmed. Rather, several other factors were discovered to have been an influential part of faculty decisions to make curricular changes (e.g., changes in texts, disciplines, accreditation requirements, and faculty interests, to name a few).

Summary Discussion: Arts and Sciences Departments

Biology. The Biology Department benefitted during the seventies from large numbers of students applying for their courses. Inside and outside the department, people viewed biology as a popular science among students. Not only was biology attractive for students filling general education requirements, many also went on to pursue a biology major over the decade.

One drawback of being a popular discipline also existed: too many students for too few faculty. Some faculty in biology were cited as teaching overloads to accommodate a heavy student demand. This demand, from the broad behavioral view, represented a kind of slack for the department, time when faculty could reduce or relax their search for new options. Did they? The qualified answer seems to be both yes and no. Respondents from biology described themselves as conservative and traditional; so perhaps, slack search was minimal and change was slight. In the respondent's view, they had a curriculum that worked, preparing students well for what lay ahead.

In contrast, the Biology Department inaugurated a Free Curriculum in 1975-76 (the brain child of one professor, but supported by
A program for majors who might want more independent, self-organized study, the Free Curriculum represented an exciting program risk, quite beyond the housekeeping routine. The Free Curriculum only attracted two or three students, however. This faint student interest may have reflected student tastes or a desire for more structure. But faint student interest may also have signaled the difficulties of novices in biology pursuing a lot of independent study successfully. Biology students were depicted as facing graduate or medical school entrance exams---where knowledge in several specific areas is required. In light of this students may have been reluctant to depart from an established course to pursue more independent arrangements. Also, faculty with heavy teaching loads were described as having had less time to spend in independent consultation with Free Curriculum students. If this was so, then students and faculty would have been inattentive to or unfamiliar with the needs of the Free Curriculum. One could view the Free Curriculum as one person's solution---student-initiated, independent study---looking for a problem. In this case, the problem was defined as a relatively structured, predetermined course of study. Apparently, students did not view the more defined, traditional regimen for biology majors as a problem or at least a problem that they would tackle; and the experiment to ease this problem died of natural causes.

While the Biology Department did not need to compete for more students, some consideration was given to "doing one's part" and "pulling one's load" in the department and in the institution. These respondents also indicated that they strongly supported the College's
liberal arts orientation. They advised their students to take electives in art, music, or literature to broaden their perspectives, as well as to balance the sizeable amount of science taken in preparation for advanced study.

It follows, then, that despite some slack in the department (from abundant enrollments), one area that the biology faculty did watch carefully in regard to student demand was the addition or substantive modification of courses. Given the constraints of teaching loads, funding formulas, degree requirements for majors, and the like, new elective courses needed to demonstrate an ability to draw a sufficient measure of student interest to be added and to stay in the curriculum. In short, adding new courses to the curriculum represented one area where a highly salient connection existed between a change (in keeping with what was viewed as educationally sound) and what students wanted and took. The connection moreover, apparently was not left to chance, since academic advising and departmental bulletins were used to keep students abreast of offerings. This particular finding was in keeping with Manns and March's and Cohen and March's work: the more mundane student enrollment consideration was a factor that influenced this portion of educational policy in biology.

Enrollments also influenced the number of sections of a course offered as well as how often it was offered. In turn, course frequency and number of sections were mediated somewhat by the size of the rooms where biology classes met. Two respondents noted a design error on the part of the architects of the building in which the Biology Department functions. The laboratories were designed to hold
only 24 students, a number sufficient for the student population when
the labs were built in the sixties, but not for William and Mary's
student population in the seventies.)

Yet another important consideration involved the interests of the
faculty. The actual offerings themselves emerged out of a person's
teaching interests (assuming that one was not forced to teach
exclusively outside of his/her areas of interests or expertise). Biology faculty indicated that influential information emerged from
changes in the literature of the discipline. The information included
changes in subject orientations, texts, and theories in the field,
which faculty tended to weave into the fabric of their courses. The
broad title and description of the course may not have changed, but
change had occurred nevertheless as the faculty attended to the
changes in their respective areas of expertise or emerging interests.
In the Biology Department, these kinds of changes were rarely
influenced either by student input or by student enrollment
considerations.

In fact, from the respondents' view, except in the area of course
additions (where student input was cited as contributing to the
change), students said little about the basic framework for their
studies in the discipline during the seventies. Information about
students' concerns with the curriculum surfaced most directly in
student evaluations and in academic advising and indirectly from
faculty feedback. (Faculty feedback represented a suspect source of
information, however, since numerous respondents in all areas noted
the difficulty of knowing who had broached a topic first--faculty or
students. For instance, if a faculty member proposed a new course citing student support as evidence of course need, it was difficult to know whether the faculty member had wanted to teach a course and had sought the students' support or whether the students' had suggested the need for the course and sought faculty support.)

On occasion, the faculty did seek information on students' perceptions. The faculty wanted to know, for instance, when something worked and when it did not. Biology faculty respondents also remained abreast of information on trends in student majors and on enrollments through internal and external sources. But few changes occurred in the biology curriculum. Few respondents recalled student comments in most of the examined areas of change, (and when students did comment, the comments were viewed as rarely affecting decisions to change). The faculty, each member with expertise in specialized areas, were also viewed as best equipped to make routine curriculum decisions. Thus, one could infer that, despite the available information, the biology faculty attended less to student consumerism concerns (e.g. what do students think they need) and more to disciplinary concerns (e.g., what do faculty think students need). The biology faculty did allow enrollments to creep steadily upwards. Respondents from the Biology Department suggested that allowing the increased enrollment was one means of maintaining a supportive load for College-wide aims regarding undergraduate education. In interesting contrast, respondents from the EPC and other departments also noted that healthy enrollments were a means of justifying program existence or proposals for new departmental ventures.
Of biology students, one could say that although they participated by enrolling and pursuing a major, they accounted for few other kinds of substantive participation in relation to the changes examined in this study. According to respondents, the students seemed bright, hard-working and largely passive about these routine changes. In another view, perhaps an actual student voice would remain a secondary consideration regardless of social relevance so long as a funding formula existed that encouraged faculty to view student perogatives in light of their relationship to resource allocation. Here, Cohen and March's suggestions seem to hold—that enrollment cycles as they relate to resource allocation will receive the attention of faculty. Said another way, allocation of faculty attention in this area may have been more toward insuring appropriate resource allocation than towards meeting student interests. One could also hypothesize that students had little awareness of a funding formula or even considered whether the formula actually benefitted them educationally. In the Biology Department, students were depicted as not demonstrating the sophistication or desire to comment on routine and, in some cases, relatively simple kinds of changes. The funding formula, while connected in many respondents' recollections to changes in numbering, represented a much more complex policy matter (a policy which, interestingly, treated students as equivalencies rather than individuals). One suspects that the formula remained, for the most part, beyond the pale of the usual 18-22 year old students' concerns at William and Mary.
Generally speaking, what the Biology Department offered to its students resulted from several inferences made by the faculty—about the past successes of their students, about present student needs, about changes in the subject field, about how best to organize their faculty to teach biology the way they thought it could best be taught under the circumstances, and about the fit of biology in a small liberal arts university. The inferences were, in turn, woven into the fabric of an established curricular routine. The faculty members who represented the Biology Department for this study showed enthusiasm and comfort when discussing curriculum routines or housekeeping procedures of their department. Further, biology respondents seemed at ease with their view of the department’s place in the university.

Psychology. The Psychology Department, in comparison, made different changes and gave different responses. In the early half of the decade, psychology attracted students consistently and well—both majors and general enrollments. Apparently, many psychology faculty hoped to underscore, indeed justify, a request for more faculty positions with the concrete statistics of healthy enrollments. Even though healthy enrollments represent concrete information, in matters of university organization, governance, and educational policy, they do not necessarily produce a direct link to a desired goal—in this case, more faculty. Several psychology faculty—who noted that their efforts were not producing the desired effects, that their classes were too large to teach psychology properly, and that they needed to take better stock of their teaching resources in relation to sound long-term educational considerations—set about to convince their
colleagues to re-think, re-group, and in effect to reorganize the psychology curriculum in keeping with the needs and constraints of the times.

In one view, the Psychology Department had a problem—an unrealized goal—looking for a solution amid existing policy considerations. Despite the presence of a kind of slack produced by plentiful student numbers, the department opted for reducing the strain of trying to deal in educationally sound ways with large numbers of students, particularly since a goal of increased faculty positions apparently was not to be realized. Using the housekeeping metaphor, the Psychology Department's change looked like a house cleaning that ultimately resulted in making the department's routine more manageable. Respondents indicated that in view of the increasing demands on faculty teaching resources resulting from slowly increasing undergraduate enrollments and a growing graduate psychology program, the undergraduate program needed such an adjustment.

After the 1975-76 reorganization, in which 57 course numbers, titles, and descriptions changed, courses were "pretty well locked in" according to respondents. While enrollments patterns did have an effect on the number of sections offered and whether a course was offered every year or every other year, student enrollments influenced class size little after the aforementioned house cleaning took place. At this point, the Psychology Department began to sound much like the Biology Department when speaking of establishing a sound course of study for their students, many of whom they considered as prospective Ph. D. candidates. For appropriate advanced study preparation,
certain courses should be offered in a certain sequence. In part, psychology faculty may have taken some cues (as one respondent suggested) from biology by making certain lab sections an optional portion of lecture/lab combinations. Larger enrollments of interested students could be handled in the lecture, while only the more serious student needed to take the lab—a practical consideration that penalized no one, given the resource constraints involved.

Psychology students apparently demanded a certain amount of attention. The faculty noted what their students were taking, as well as what students had to say about the curriculum in psychology. Concerning the routine changes examined, students commented on the addition of courses, changes in credit requirements for majors, and on prerequisite requirements for certain courses. Where student interests and faculty interests merged, a new course occasionally would emerge. The reverse was true of prerequisites. Respondents recalled students wanting fewer prerequisites for certain courses, but psychology faculty disagreed and prevailed. Moreover, faculty in the Psychology Department were depicted as attending to students' concerns selectively, depending again on both educational and practical considerations. Where prerequisites were involved, the psychology faculty felt pressed to handle more students more efficiently while at once ensuring sound preparation. The faculty, in turn, viewed more definitively outlined prerequisites as solutions to both concerns.

Respondents from psychology were attentive to information on trends in student enrollments. This information came from
institutional and from external sources. But, as one respondent noted, when analyzing the information, "you never really knew what . . . variables . . . influenced the number of kids in class and in . . . concentration." Thus, psychology faculty inferred that what happened in introductory courses impinged on the number of majors they had. They inferred that their majors needed a certain course of study. They inferred that they would receive no increase in faculty positions. Nor did psychology respondents seem to think that this was haphazard inference. One respondent noted, moreover, that opinions and approaches differed among psychology colleagues over meanings imputed to various signs and symbols under scrutiny here. For example, despite the curriculum revision that placed limits on class size by level of course, some faculty were cited as still preferring to negotiate their own class size for educational, practical, and personal reasons. These faculty disagreed with departmental policy limiting class size and the merits ascribed to that policy by its proponents.

In comparison to the Biology Department, where faculty were depicted as trying to cope with gradual increases in student enrollments without much further curricular adjustment, the Psychology Department did adjust its curriculum to handle the enrollment situation as they viewed it. The Psychology Department, moreover, had shown steady enrollment increases until 1976-77 when their major curriculum adjustment went into effect. After that, while undergraduate enrollments did not decline below the level present in 1971-72, they also did not significantly increase. In fact,
enrollments appeared to fall off slightly in 1979-80 and 1980-81. The number of psychology majors, in comparison, rose over the decade, except for a decrease in 1980-81.

Even with these variations in general enrollments and majors, the only significant changes noted in the psychology curriculum were those in 1976-77. As the respondents indicated, their decision to make this particular adjustment was influenced less by student demand, more by faculty needs, interests, resources, and views of a sound preparation for students of psychology.

In interesting comparison with respondents from the other two arts and sciences departments, respondents from psychology had been generally indifferent to the notion of double majors and opposed to the later notation of minors. In turn, this reflected little attentiveness to students' lobbying efforts for minors. The faculty paid more attention instead to their own views of the merits of these options. Thus, while the department adjusted to the College-wide policy changes connected with double majors and minors, it did not occur with an eye toward meeting these particular student interests. This also signals qualifications to a broad behavioral perspective of organizations. The Psychology Department had, for example, its own distinctive characteristics, interests, and personalities. These characteristics were evident despite the presence of other policy considerations which were debated College-wide.

**Philosophy.** Cliche-ridden though it may sound, respondents in the Philosophy Department approached the interview topic philosophically. One respondent joked, "We only deal with truth
here." Generally speaking, the routine changes that the department made during the decade were in keeping with the broader behavioral theory. Philosophy faculty constituted a relatively small department; they had smaller enrollments; and in comparison with the other two arts and sciences departments examined, they made the most regular changes on a yearly basis in each aspect of their curriculum during the decade. (See Chapter Four) It appeared that with less slack, search for options was greater, and aspirations were connected to the department's perception of themselves (as a Philosophy Department) and events related to them.

A qualification to the broad behavioral theory existed in the Philosophy Department as well. The department's respondents had originally championed the idea of double majors. Later, they perceived themselves to be teaching too many unserious students who were pursuing philosophy as their second major. The department was already serving a relatively consistent number of students for its size. In hopes of remedying the situation, the philosophy faculty decided to increase requirements, in part, to discourage less serious students. Rather than make their curriculum more flexible (as theory suggested should happen), the faculty began to limit the options for students. While it is true that many more new courses were added to the philosophy curriculum during the era in comparison to the other two arts and sciences departments, these additions also resulted from a combination of factors (e.g., new faculty, changing faculty interests, and changing departmental emphasis). As several respondents indicated, the department did not feel so threatened as to
add courses solely to attract greater numbers of students. Philosophy faculty attended as well to the kind of student they desired. While attracting enough students was "always a factor" the faculty still felt "luckier than most Philosophy Departments in the country in continuing to have a sufficient number of qualified students."

Perhaps the feeling of having maintained a degree of slack emerged in part from the way the philosophy faculty viewed the fit of the discipline in William and Mary's undergraduate program. Indeed, respondents (both inside and outside of the department) indicated that philosophy could be well paired with most other disciplines to provide a broad, liberal double concentration. The members of the department did not view themselves as endangered species at William and Mary, though they took note of declining interest in the humanities nationally.

When the double major option resulted in what the Philosophy Department perceived as less serious students, the faculty sought to remedy the situation by mirroring some of their expectations in better defined requirements for their majors. It represented a risk calculated to do two things--decrease the numbers of less serious students and increase the quality of the program. In one view, this is an example of solutions and problems mixing freely. Again, it is difficult to say which surfaced first--a desire for a quality program in philosophy or a need to respond to increased numbers of less serious philosophy students. Since a quality program in philosophy seems to have been an ever-present concern during the decade (with variation in the view of what "quality" should look like from 1970 to
1980), the advent of less serious philosophy students could be viewed as a problem to be treated in the context of another problem (e.g., changing views of quality). Or "less serious students" could be viewed as a rationale for making adjustments which would effect quality. Also, the reverse could be the case—pursuit of quality could have served as a rationale for dealing with less serious students. Regardless of which view is closest to reality, one thing seems clear: the philosophy faculty were less influenced by students' enrollment behaviors, and were more influenced by faculty deliberations over such things as disciplinary interests or departmental resources.

Philosophy faculty were not cavalier in their deliberations; they knew that even amid educational considerations, which they described as paramount, they still had to carry enough enrollment to justify the size of their faculty. Thus while the department may have decided to take good stock of its educational program, they did it with an eye toward maintaining existing positions.

Interestingly, of the three Arts and Sciences departments queried, philosophy respondents spoke the most of student participation in their routine policy discussions. This could have been, in part, a function of the smaller size of the department plus the absence of a graduate program in philosophy. Without the demands on time and attention of a large graduate or undergraduate constituency, faculty could attend to student's concerns more freely. In fact, respondents described themselves as seeking out and valuing student input. Philosophy faculty also described their discipline as one which
requires discussion among participants, another element that could encourage greater faculty/student interaction. After the philosophy faculty determined a need to strengthen disciplinary requirements, however, the respondents indicated that they used student comments only "to confirm us in our intention" rather than as an equivalent part of participatory deliberations.

Even the housekeeping routine of the Philosophy Department was grounded in an on-going dialogue over the department's philosophy of education. This dialogue encompassed many topics under the general rubric of how best to encourage philosophy students in their own inquiries in the discipline. Did a flexible philosophy curriculum organization that emphasized the student's responsibility for establishing a suitable program of study provide a firm foundation for their students? Or did a curriculum that was more tightly organized by the faculty, with more definite requirements set out for students, have greater educational merit? Which course appealed to students' individual needs as they pursued studies in the discipline? One respondent did recall some practical considerations amid the discussions of ideals. He remembered renumbering some courses for wider appeal, while another recalled adding courses on current topics to appeal to a certain clientele. In short, educational philosophy and educational pragmatics were described as linked when philosophy faculty made curriculum adjustments.

Yet another respondent from the Philosophy Department suggested that certain changes reflected a general shift in social contexts, from a more permissive to a less permissive era. This brought into
better focus the way meanings and thus emphases changed from one era to the next. For example, one respondent, after explaining the steps the department had decided to take to decrease the number of frivolous majors, exclaimed, "It worked by the way!" Were these respondents concerned about the decreasing program flexibility for students which would result from adding program requirements? If the number of frivolous students, who might not find a less flexible program appealing, was too high, their absence might signal significantly decreased enrollments. This change toward increased program structure also represented a shift in the department's philosophy. Hence, philosophy faculty members may have been concerned about the ultimate impact of increased program requirements on budding philosophers. Again, educational ideals and pragmatics may have been considered concurrently.

According to Feldman and March, one characteristic of organizations with ambiguous missions and unclear technology is a tenuous connection between information and decisions. The connection can become all the more tenuous over time, particularly if the same rules or routines serve to channel decision making. Information that appeared to have decision relevance at one time, at another time does not, even if the decision routines and rules remain the same. People attend to the same things differently from one time to another even as they maintain the routine. Independent study looks liberating in one era, permissive in another, for instance. This is not to question motives; rather it is to focus on perspectives. One can hypothesize that the philosophy faculty did not know with certitude what the
impact of more rigid requirements would be on their enrollments and their ultimate programming ability. "It worked" in the sense that not too many students were discouraged, some serious, budding philosophers were encouraged, and the department could continue to organize their program more systematically than they had in the preceding ten years. The Philosophy Department changed in ways similar to the Psychology Department, only taking a longer adjustment time to effect the structure necessary to handle the students numbers in practical, educationally sound ways.

One noteworthy characteristic was in the appearance of the faculty in the Philosophy Department as a small, communicative group. Whether their curriculum was loosely structured (as at the beginning of the seventies) or more tightly structured (as at decade's end), respondents described themselves as deciding in concert on these issues. Perhaps these faculty were more in concert with each other as the decade evolved, since one respondent noted that the retirement of an opinionated chairman midway through the period marked the beginning of a new era in the department.

It is interesting to observe that all three Arts and Sciences departments tended to make their curricula less flexible for students as the decade progressed. These departments tended to require that their courses be taken with more regard to sequencing and appropriate preparation for different course levels. One department (Psychology) suggested that they had looked to another (Biology) for ideas about approaches to change. (In this case, the idea was to separate lab and lecture sections in order to deal in educationally sound ways with
more students.) Thus departments did look for some of their adjustment alternatives amid the alternatives already in use in other departments as March and his colleagues suggested would be the case. Furthermore, the respondents from the Educational Policy Committee indicated that the departments tend to stay in line with each other regarding many kinds of program requirements.

The respondents interviewed in the three Arts and Sciences departments represented the principal arbiters of their curricula routines for the decade. There were essentially three people in each department who had been responsible for these curriculum adjustments. Curriculum housekeeping of this sort is not a well-loved task, with many aspects of the routine viewed as necessary distractions from the essence of the educational enterprises. Such curricular adjustments constitute time consuming chores that take people away from their disciplinary interests. The task becomes less consuming, both in time and energy, when little foment exists over basic curricular aims and when basic curriculum design remains relatively unchanged. Although competition may have existed between departments for students, these three departments appeared to view that as a natural phenomenon, seeming relatively assured of their place in the larger program arena. Other Arts and Sciences departments, which had not managed to maintain the relatively stable enrollment patterns of these three, might have exhibited more anxious behavior. The age and size of a department relative to other departments could affect the degree of comfortable fit among other departments, too. In an organization where communication involves messages inferentially marked by reputation,
prestige, and precedent, the history of a department can influence what people think and how they behave in relation to what they think. Neither should one neglect the communicative influence of a dean particularly if he/she "leaned" on departments for not "pulling their load" or of a department chair with strong views on appropriate disciplinary or practical aims. For example, a dean or department chair could consistently behave in such a way as to suggest that rewards (in whatever form rewards may take—salary, new positions, etc.) go to those with well-subscribed courses. This behavior could influence faculty to attend more closely to having well-subscribed courses.

All three Arts and Sciences departments moved from less to more structured curricula in prerequisite and credit requirements. To say that this move reflected the permissive sixties versus the impermissive seventies, glosses over certain elements of the latter half of the decade. Faculty minutes in Arts and Sciences hold increasing references to budgetary constraints in the latter portion of the seventies. Other factors existed: a tenured, aging, underpaid faculty; increasing public and legislative concerns for accountability; growing perceptions of eroding quality in higher education nationally. Factors such as these contributed to an emerging social context, marked in part by increased attention to curriculum requirements.

One means of more efficiently providing education in liberal arts colleges involves slowly increasing student body size without increasing faculty size. Undergraduate enrollments increased over
the decade and respondents noted the difficulties of responsibly dealing with increased numbers of students. Several respondents said that when left to more random choices (as would be the case when heavy teaching loads undercut the time faculty can spend in academic advising), students did not necessarily establish sound programs of study. As a practical matter, most faculty seemed hesitant to put rigid limitations on student enrollments, despite the feeling that they were reaching saturation limits in the numbers that could be reasonably advised and taught. Instead, Arts and Sciences faculty offered, greater direction to their students through departmental course scheduling and requirement notation. Moreover, where enrollment limits were deemed necessary to convey subject matter appropriately, other parts of the curriculum (e.g., large introductory sections, optional lecture/lab sections) provided enrollment balance. The students, in large part, were depicted as accepting of these circumstances, neither making comments nor behaving in ways significant enough to influence faculty opinion in most of their adjustments (the exception being the move to double majors, and to minors).

Summary Discussion: The Professional Schools

Turning to the professional schools, the records showed that a substantial number of students pursued concentrations in business. In contrast, fewer and fewer students pursued degrees in education. Although many Arts and Sciences respondents said that they advised their students to take a liberal selection of courses across
disciplines, how those same faculty may have advised students interested in business or education is unclear. Most faculty indicated an awareness of the drift toward business-oriented pursuits among students—a drift of swelling proportions as the decade wore on. Some seemed viewed the changing tide of student interest more benignly than others. Strong opinions existed nevertheless on the many faces of the debate over the place of professional or applied courses, programs, and schools in a liberal arts institution.

Business. Business faculty and administration managed the business curriculum in ways similar, on the surface, to Arts and Sciences faculty (from which it had split in 1968 to form a school). Also, at first glance, when trends in business curriculum change were compared to patterns of student enrollments, support for the March-Simon theory seemed evident. The increasing slack from abundant enrollments in business could have contributed to a climate in which the search for new options relaxed and aspirations grew. For example, the school hoped to increase its faculty ranks. As before, however, some qualifications in this general pattern also existed.

In comparison to the Arts and Sciences departments, the School of Business negotiated curricular adjustments more informally. A larger number of people chaired the undergraduate business curriculum committee (separately from graduate programming) over the decade. Business faculty appeared to take turns with curriculum committee duty. Further, the Associate Dean of the Undergraduate Program in business managed many of the school’s housekeeping activities. Accounting faculty conferred with other accounting faculty; management
faculty with other management faculty. The emphasis of the decade seemed to be on program building, growth in faculty positions, programs, and in numbers of students. The school also had an external constituency that required consideration. The school maintained an applied, professional orientation in its undergraduate programs.

When the accrediting association for business schools, The American Association for Collegiate Schools of Business (A.A.C.S.B.), suggested program changes, the school attempted to meet the requirement. In fact, one respondent described the early years of business curriculum formation for the new school as a process of listing accreditation requirements on the left-hand column of a page and matching corresponding business courses in a right-hand column. The undergraduate business program became accredited in 1972, only four years after the school's formation. Having solved an accreditation problem, business faculty could turn their attention elsewhere (although accreditation represented a recurring concern).

Many respondents from all parts of the institution described William and Mary's students as approaching the marketplace through defined credentialing mechanisms. The business faculty also acknowledged the need for defined programs. The C.P.A. accounting subprogram ultimately allowed students only three elective hours out of the recommended 60 hour accounting program—a requirement viewed as necessary to pass the C.P.A. exam in Virginia. Students complained about the regimen, but completed the requirements nevertheless. (Business faculty were quick to note the high percentage of William and Mary students passing the C.P.A. exam at first sitting.) A good
number of William and Mary students seemed to have perceived a business major as a prudent means of preparing for successful future opportunities. The business faculty and administration were described as viewing the students similarly. Meeting aspirations for increased staffing, in their view, hinged partially on demonstrating a need for more faculty positions. In the business school, the "floodgates" remained open to a swelling student tide, over the objections of some overloaded faculty.

If the business school curriculum showed little evidence of changes made to attract more students, neither did business faculty attempt to discourage interested students. New courses, even if designed to attract different kinds of students, were also given attractive scheduling slots to encourage enrollments and thus course success. In an institution where some faculty remained largely hostile to subject areas viewed as applied or professional endeavors, student demand remained a hedge against the possible results of heated ideological debate. In addition, the business school had the state funding formula to keep in mind. The business school faculty made more reference to a desire to grow than did any of the other faculties queried. Whereas other groups interviewed spoke of attending more to a maintenance of their undergraduate programs, the business school respondents spoke of being attentive to expansion. In order to place arguments for increased faculty positions before a state coordinating board, one needed the support of hard facts in the form of too few faculty for growing student ranks. Thus, care was taken when new courses were added to the curriculum.
In contrast, the students' concerns, as individuals, were rarely mentioned as a consideration. Most of the respondents described themselves as knowing best what their students would face when they entered the business arena. Except in a few cases, respondents said that they did not seek students' opinions on the kinds of curriculum matters under consideration in the interview. In general, the business faculty were described as attending selectively to maintaining a stable program (e.g. "If it's not broken, don't fix it."), to justifying its aspirations (increased faculty and expanded program coverage), and to meeting a student demand (that was at once exhilarating and overwhelming). Part time, adjunct faculty, in turn, were cited as necessary to help fill the teaching requirements resulting from relatively unchecked demand.

Education. The School of Education appeared as an interesting contrast and comparison as a professional school providing undergraduate programs at William and Mary. Having grown from department to school status in the early sixties, the School of Education's flirtation with abundant student enrollments was largely past by the dawn of the seventies. Teachers were increasingly in less demand. Changing demographics and technologies affected education schools in many ways. With declining birth rates after the post war "baby boom" era, fewer teachers were required in school systems. Also, women, who had traditionally filled the ranks of primary, elementary, and secondary teachers, had other career options which they were pursuing in greater numbers than ever before. Schools of Education felt the shift in actual numbers and in programming needs.
The School of Education also had to meet accreditation (National Council for Teacher Education, N.C.A.T.E.) standards as well as state teacher certification requirements in its programs. Their student majors remained tightly scheduled in an attempt to meet general education, and certification requirements in four years. Curriculum changes appeared to occur as the March-Simon theory suggested. Over the decade, the curriculum changes were increasingly numerous as student enrollments fell off. For example, the state coordinating agency (S.C.H.E.V.) retired the Education School's secondary education program due in part to insufficient demand which resulted in the inefficient use of resources. In the several years prior to the last degree awarded from the school in secondary education, a significant number of new courses emerged. So it appeared that as slack decreased, search for options increased, and aspirations shifted. And, respondents noted instances of faculty "building new turf" and "cultivating other interests" in the years before the degree in secondary education ceased to be offered. Aspirations for a secondary degree program ceased to exist; and aspirations were described as having been focused elsewhere. Another explanation of this phenomenon depicted education faculty shifting their emphasis on preparing teachers to an emphasis on providing services to a broader constituency. Other complications existed, however.

Obviously, meeting state certification and accreditation requirements represented qualifications or complications of the adjustment process. Remaining accredited while at once providing certifiable programs represented a primary consideration. Some
changes, moreover, were not entirely new additions or modifications to
the curriculum, with courses appearing in the undergraduate program
from the graduate program. James March and his several colleagues
suggest frequently that people will look for new alternatives in the
vicinity of old ones. This phenomenon seemed in effect here. Some
adjustments also occurred in order to serve both graduate and
undergraduate student populations. To be sure, as some faculty saw
their traditional "turf" eroding, they set about "to broaden their
base," solidify and justify their existence. If S.C.H.E.V. could take
away programs, the possibility existed for faculty to disappear as
well. Further, as one education respondent noted, a change in
philosophy was occurring as education schools became service agencies
more than teacher training agencies.

As with the other departments and schools, the School of Education
added some new faculty during the decade and gained some
administrators as well due to institutional reorganization. While
increased staffing might not present problems where enrollments were
increasing or constant, increased staffing in the face of declining
enrollments may have encouraged education faculty to place greater
emphasis on maintaining FTE's, particularly as the decade progressed.
Education faculty heard and read of other schools closing, being
re-organized, of colleagues thinking of and re-training themselves for
positions outside education. In addition, another organizational
difficulty persisted. Although the undergraduate program in
elementary education was largely dependent on Arts and Sciences
departments for disciplinary courses crucial to teaching, most
education faculty nevertheless remained outside the inner circle of liberal arts ideologues, as well as organizationally separate. For example, even when the education school would propose changes in their undergraduate program, the changes needed to be in keeping with educational policy in arts and sciences. In one instance, a change in credit requirements for majors in elementary education took several years to pass through the Educational Policy Committee of Arts and Sciences. Such a lag time encouraged frustration among education faculty. The problem here was further described by several respondents as a tension between notions of what an undergraduate education at William and Mary should be about. The tendency in Arts and Sciences was described as one of separating the education school for its professional or applied orientation. This separation also seemed to discourage open articulation of any mutual interests held between the two faculties on behalf of sound educational principles. In turn, problems and solutions often remained separated by the organizational and ideological distinctions sustained between faculties.

Education respondents indicated more sensitivity to enrollment considerations in all the curriculum change variables than any other respondent group. Most indicated that the point of many decisions was to maintain and not to discourage enrollments. In contrast, education students were described as having had little to say about the changes made. As with the other institutional groups examined here, students in education were depicted as having carried out whatever program was necessary to complete requirements for graduation and certification.
Students accomplished the requirements with more flexibility perhaps in the School of Education (despite the constraints of certification), since faculty viewed themselves as willing to negotiate scheduling. This willingness, in part, resulted from the education school’s service orientation. The School offered, as a service, courses at night and in places outside of the school itself (e.g., locations in the surrounding geographic area). Some respondents also indicated that with smaller numbers of student majors, it was easier to remain in touch with students’ scheduling difficulties and adjust course offerings accordingly. It is interesting to note here that in addition to the aforementioned flexibility, there was an increasing number of education courses in the curriculum which did not require prerequisites. Despite these two trends—trends that the broad behavioral theory suggested should occur—education students still followed a rather defined, required course of study to fulfill degree and certification requirements in four years.

When education faculty attempted to broaden the base of educational services offered to students, new curriculum alternatives sometimes appeared from the general vicinity of old alternatives. There were several instances where new undergraduate course offerings emerged from similar offerings at the graduate level. There were also courses offered which were “spinoffs” from existing courses. Once again, this tendency was in keeping with what March and his colleagues suggested would be the case. A reluctance to discard courses in the School of Education also left a reservoir of alternatives with which to work. (One should note that all departments and schools examined
in this research showed a reluctance to drop courses from their curricula.) Further, several relatively consistently enrolled graduate education programs contributed to available programming and housekeeping alternatives at the undergraduate level. Even with existing reservoirs of alternatives, many respondents in education, and the other departments and schools as well, noted difficulties in becoming too "creative" with housekeeping routines. One could not, for instance, frequently or arbitrarily change course numbers from graduate to undergraduate level. A need existed to keep some consistency in number, course, and requirement arrangements so that catalogue entries and transcript policies could be maintained logically, efficiently, and effectively.

As in the business school, care for maintaining the routines of undergraduate education programming fell to numerous education faculty, with the curriculum committee chair changing on a yearly basis. Also the education school graduate and undergraduate curricula were managed under the same committee. The rotating committee chair coupled with the combined undergraduate and graduate curriculum management added layers of complexity to curriculum housekeeping routines. Education respondents like those in business, described the routine as political, informal, and influenced by precedent.

Comparative Perspective. Comparing enrollments in the five groups examined here, one can see a trend in general enrollment patterns in the two professional schools not visible in the three Arts and Sciences departments. While the Biology, Psychology, and Philosophy Departments demonstrated relatively consistent
enrollments—both in the numbers of students taking courses and numbers of students pursuing majors—over the decade, the Schools of Business Administration and Education showed greater fluctuation. (See Chapter Four, Figures 2, 4, 6, 8, and 10.) Business school enrollments tended to climb steadily upward; the education school showed a slightly descending enrollment pattern, with a sharp decrease in number of majors in one year mid-way through the decade. Both schools remained vulnerable to shifts in students' concentration interests since neither offered courses that would satisfy the general education requirements of the curriculum. Thus, most of their undergraduates participated in their programs for only two years (e.g., junior and senior year). Neither school had an assured general education clientele on which to rely. In turn, both schools may have needed to attend more closely to enrollment related concerns.

Also, both schools had been relatively recently organized (in comparison to the other departments studied). This too may have contributed to each school having paid more overt attention to enrollment characteristics. Respondents from both schools more readily voiced a cognizance of some implied enrollment considerations in the adjustments made than did respondents from the three Arts and Sciences departments. Respondents from Arts and Sciences departments suggested that enrollment concerns had not significantly influenced their curriculum change decisions. In contrast, Educational Policy Committee respondents tended to answer with more skepticism. EPC respondents indicated that enrollment concerns existed among Arts and Sciences departments as they made these kinds of curriculum routines.
Several EPC respondents also suggested that if encouraging student enrollment was the primary reason a department had for making a change, that this was not likely to be stated. Student enrollments would more likely surface in discussions as a secondary, practical issue, if it surfaced at all. This observation coincides with Cohen and March's notion that educational policy rationales are likely to be stated in terms of the educational principles involved rather than in terms of any pragmatic constraints which may be present.

Students served several masters when pursuing professional certification or degrees: Arts and Sciences notions of general education requirements, professional school notions of specialized study requirements, accreditation notions of appropriate professional preparation; and certification or licensing notions for well-prepared entering practitioners. Similar notions of adequate preparation may have existed in those Arts and Sciences departments that housed graduate programs or who viewed themselves as providing preprofessional learning. But, a stated emphasis on integrated undergraduate liberal arts programming served to soften the direct influence of such credentialing mechanisms on expressed curriculum rationales in Arts and Sciences.

Finally, the majority of respondents in all departments and schools studied here indicated an awareness, perhaps a more salient awareness as the decade wore on, of carrying one's share of the enrollment load. In addition, funds were allocated among the departments and schools based on enrollment ratios (e.g., the number of full time equivalent students at a certain level). The state
coordinating agency, S.C.H.E.V., in its deliberations and policies encouraged faculty to keep factors related to funding in mind whenever curriculum adjustments occurred. Other factors, like traditional educational imperatives, faculty interests, new faculty, retiring faculty, changing texts, changing external requirements, re-negotiated internal emphases, to name a few, also figured in curriculum adjustment processes. Direct student input concerning these adjustment processes did not surface as a factor in the respondents recollection of the decade's events. Direct student influence seemed somewhat removed from the view of faculty making curriculum changes. Other interests and imperatives captured faculty attention more directly. Indirectly, however, students' voices could be heard as they pursued various areas of interest. As student areas of interest could be seen to affect faculty areas of interest (for resource allocation, disciplinary concerns, and the like), faculty gave thought to students' pursuits. Some respondents counted students and adjusted curricula differently from others, depending on their respective vantage points, information sources, information uses, and attentiveness to both. Thus, each department's and school's respondents described their own settings such that individual characteristics emerged for each group, even as the groups shared some generic qualities. Moreover, any influences on faculty decisions to make routine changes which stemmed from trends in the courses students took and the majors they pursued were described as having been realized very indirectly or by inference.
Indeed, several respondents noted that even with abundant information regarding class size, enrollment patterns, educational considerations, and social concerns regularly passing across their desks, it nevertheless remained difficult to say with certitude that changing "x" would result in "y" happening. Many factors were described as converging and impinging on each other at once, making it all the more difficult to say with assurance what the consequences of a decision would be. The lag time between a curriculum change and students' response to the change also encouraged tenuous information-decision links. If, for instance, a department added more "inviting" introductory courses to encourage more students to try their offerings, become involved, and take a major with them, it could take at least four years to know the complete effects on enrollments of the change.

Further, an increasingly vigilant State Council for Higher Education in Virginia (S.C.H.E.V.) apparently mediated certain portions of the implicit connection between student enrollments and curriculum change. Some courses were apparently renumbered for more advantageous funding. In turn, those course numbers may have symbolized a level of funding more than they indicated a level of course difficulty to students. In some cases, students may have assumed that a 100 level course was less difficult than a 200 level course, and a 300 level course less difficult than a 400 level course. Students may also have organized a program of study around a logical progression of 100, 200, 300, and 400 level courses, moving from less difficult to more difficult courses over time. If courses were
numbered for funding purposes rather than sequencing (e.g., 100 to 200...) purposes, then numbers would serve to aid students very little as they organized a program of study. Philosophically, however, the funding formula presupposes that difficulty increases with specialization. The extent to which a faculty attended to funding ratios rather than to the educational principles involved in sound disciplinary preparation (which can be reflected in appropriate course sequencing) would represent, then, an important distinction.

Moreover, S.C.H.E.V.'s funding formula ultimately counted students in relation to the course level in which they were enrolled. Thus, regardless of the symbolic function of course numbers, one can hypothesize that practical and educational considerations remained linked in considerations to change course numbers. As earlier suggested, the funding formula may have served to mute the significance of course numbers as a channeling device for students as they attempted to organize their studies. If this were the case, then course numbers may have become only incidental packaging devices as faculty were encouraged to number courses for advantageous funding. Students course organization would, in turn, have less relationship to a logical or sequencial system of course numbering. The channeling device would become more connected to resource allocation avenues than to avenues designed to encourage a kind of learning process.

Decisions regarding curriculum description and channeling devices like titles, descriptions, area/sequence designations, credit requirements for majors, and prerequisites designations were described as having been less influenced by enrollment considerations than were
decisions to add something new to the curriculum. The faculty did not adjust the former variables with direct or explicit intentions of stimulating enrollments. Rather, many of these changes occurred in the context of departmental, school, or institutional precedent in combination with evident, current disciplinary or subject trends. In short, faculty attended to interests more directly connected to them and the requirements of their work as they perceived it. While enrollments were considered in decisions to change these variables, the considerations were very slight. (A highly indirect and implicit connection may have existed in the updating of some titles and descriptions. Not only would updates reflect new knowledge or approaches to a field, but also—particularly in the case of trendy subjects—they mirrored an appeal to a certain student clientele. For example, a course on ethics in the medical profession offered by the Philosophy Department during the decade reflected disciplinary attention to the topic as well as attention to students who had expressed a similar interest. In interesting comparison, an EPC respondent had noted the renaming of a few courses using words that contemporary students would indeed recognize as current or up-to-date. Again, pragmatics—recognizable terms—and educational necessities—accurate nomenclature for a contemporary context in a disciplinary area—walked hand in hand.)

One curriculum change variable, new course additions, was more directly linked to enrollment considerations by all respondents. When new courses were added to the curriculum as electives, faculty interest and support needed to combine with student interest and
support for the course to remain a fixture. Given the difficulty of predicting the concurrent combination of required interests and support, it is easy to see why courses were rarely, formally dropped from any of the curricula reviewed (if no real costs were involved). It is also easy to see why course additions might not have been lightly debated in the respective departments and schools, whether enrollments were up or down. One must consider not only the educational merit of the course but also how well students would subscribe to it (particularly if an elective). These faculty members did use new courses to attract different kinds of students; and they did not use the device with reckless abandon for practical and educational reasons. Staffing, enrollments, scheduling, educational merit, and curriculum fit (and particularly in the case of the professional schools, accreditation or certification requirements) all needed consideration when adding a course. (Arts and Sciences departments also underwent accreditation reviews, but Arts and Sciences respondents did not voice a concern with this as a process affecting curriculum routines.) Said differently, a particular faculty was described as allocating their attention to certain mixtures of educational principles and pragmatic practices depending on their view of the importance of principles or practices at a given time.

Interestingly, the findings and conclusions presented here draw attention to aspects of the research design. The curriculum variables were chosen and organized in an attempt to extend Manns and March's work through more detailed description and analysis of the context of
change and to remain in keeping with the propositions March and his colleagues set out in their work. Thus, the six curriculum variables were grouped according to aspects of appearance, opportunity, and accessibility. March and his colleagues had suggested that enrollment market shifts should encourage faculty to respond by changing curriculum appearances, opportunities, and accessibility—with an eye toward a more attractive curriculum for students (particularly in departments not protected by strong reputation and the resource accumulation ability which reputation seems to foster). In contrast, the findings of this study suggest that such a grouping of curriculum change variables may not be particularly helpful. The seeming pervasiveness of single-loop learning behavior, as the faculties followed traditions and routines along lines of disciplinary and faculty-related interests suggested that little attention was given to general categories of the curriculum which dealt with appearance, opportunity, or accessibility. Thus, while grouping curriculum variables by aspects was useful as an initial organizing device, it was not particularly useful in analyzing findings.

In comparison, enhanced analysis and greater conceptual significance may emerge in future research if research design and theoretical orientation concentrate more on better descriptive analysis of academe's information feedback processes. Again the question remains one of where faculty members allot their time and energy. What does inform their decisions? Where do they allocate their attention? This study offers some general suggestions in that regard without confirming or disconfirming the perspective of March.
and his colleagues in this vein of inquiry.

All respondents indicated that there were varied sources of information from which they inferred meaning and to which they paid varying degrees of attention. Amid all the information, faculty and students alike were described as relying on established routines and curriculum forms to aid in channeling the information used to make decisions. The connection between students' pursuits and curriculum change was depicted as a tenuous one, with faculty inferring some meaning from student trends, but not enough to influence many of their decisions. Only decisions to add something new to a curriculum were described as having occurred with direct attention given to student's pursuits. More importantly, faculty described themselves as defining problems and solutions more in light of familiar operating procedures, faculty interests, and faculty perceptions of educational needs. The students were depicted as continuing to apply, receive admission, and graduate from William and Mary with few organized or sophisticated suggestions or complaints. The only time that respondents recalled a direct student influence on curriculum change occurred when double majors and minors surfaced as an issue. Here the faculty reluctantly bowed to student pressure for more visible credentials which students might find useful in a competitive work arena. One can speculate that attentiveness to competitive work arenas in general is an area where faculty shared some mutual understanding with their students, despite the different vantage points. In keeping with Cohen and March's notion of how ideals and pragmatics often walk hand in hand in the academy, the competitive side of academic work may vie for an
important segment of faculty attention. Thus to say that faculty allocate attention to disciplinary interests, educational considerations and the like may better describe faculty behaviors when accompanied by a pragmatic concept of faculties' own human competitions. While Cohen and March stress competition for resources as a factor commanding faculty attention, there may be other competitions as well (e.g., competition for teaching and research recognition or competition for tenure or tenure track positions). When looking at attention allocation, moreover, it seems an interesting twist that one of these human competitions may in essence be the competition for attention (as receiving attention relates to realizing rewards, aspirations, or goals that people set for themselves). To draw a fuller research perspective, an enlarged concept of competition needs to be addressed as it speaks to where a faculty expends time and energy and thus allocates their attention.

Interestingly, the findings of this study suggested that increasing student demand during constrained times results in single loop learning behavior and accommodative change. In contrast, where decreasing demand was a concern, decisions looked more substantive. For example, changes in the School of Education included such things as a re-orientation of the school's mission (from teacher training to service), as well as State mandated program elimination. The State mandate forced a focus on ending a program and thus made double loop learning behavior a necessity.

As these respondents explained the events, the influence of trends in the courses students took and the majors they pursued on
curriculum change decisions was not directly or explicitly realized. Only in the case of adding new courses did faculty attend to trends in students' pursuits familiar curricular forms existed with which faculty and students could deal. These forms (e.g., credits, degrees, course designations, routines, traditions) gave faculty and students connecting points as they both used the shared language of an academic curriculum to negotiate their own processes and pursuits. At the same time, this shared language seemed, as March and his colleagues suggested, so broadly and variously interpreted as to encourage separation between information, meaning attributed to information, and decisions made. For example, course numbers had greater significance as an organizing mechanism in some departments. For those departments, decisions about course re-numberings would be treated differently from departments which viewed courses numbers as arbitrary figures.

Finally, the research disclosed a view of adversity which goes beyond that considered by Manns and March. Those groups where enrollments were abundant indicated that they felt some adverse effects of overpopulation. There were too many students for too few professors to handle in educationally sound ways. In a climate in which faculty perceived no opportunities for increased staffing to handle large student populations, changes were made to handle the difficulties of oversubscribed programs. For example, the School of Business needed to employ adjunct faculty to handle student demand. And both the Biology and Psychology Departments modified lecture and lab requirements in order to deal with student demand. These
findings, in turn, suggest a need for an enlarged concept of adversity. One might ask, for example, where or in what form adverse conditions arise as they relate to increases (as well as decreases) in student enrollments.

The groups studied here described an era when economies were being sought College-wide as a result of state or institutional policies. These policies had been designed in an attempt to handle effectively a no-growth situation (e.g., no significant increase in resources or in the size of faculties or student bodies). In turn, the constraints of these circumstances contributed to a kind of adversity felt by all, regardless of student demand. At one end of the spectrum, heavily subscribed departments made curriculum adjustments to accommodate increased student demand. These faculty were described as wanting to do their part, given the constraints of the times. At the other end of the spectrum, less subscribed departments made adjustments to accommodate either decreasing or fluctuating student demand. These faculty too were described as conscious of the need to pull their share of the load. Thus, given a general perception of constrained times resulting from policies designed to deal with changing demographics and dwindling resources, adversity could be seen as a theme recognized by all.

Moreover, the findings of this research contributed to the notions which Manns set forth about organizational slack, organizational search, bounded rationality, and aspiration level goals. While neither confirming nor disconfirming the perspective of March and his colleagues in this vein of research, this study raised
some new questions. The effects of trends in student enrollments on curricular change were described here as part of a complex information exchange process. The information bases considered in each group's deliberation processes were many and varied. Thus, one basic suggestion emerging from these findings calls for renewed attempts at contextual enhancement of the same research question. For example, one might further seek to delineate the kinds of information bases used in making routine curriculum changes as well as the importance attributed to kinds of information Manns and March provided as a useful lens with which to view the landscape of student enrollment and curriculum change. To approach this landscape through a study of perceptions of information feedback processes proved useful as well. That information to which faculty perceived themselves to have given their attention became more clearly defined; and one's view of the context of change was enhanced. Nevertheless, more details of the landscape still need to be sketched in.

Suggestions for Future Research

For the three Arts and Sciences departments examined, the faculty decided about five of the six kinds of curriculum changes with scant attention paid to students' pursuits. When adding courses to the curriculum, however, more attention was given to whether there was a demand for the course, particularly if it was to be an elective course. It was not, for instance, unusual for these three departments to add a course with thoughts of attracting more or different kinds of
students to their program. Interestingly, more new courses were added in the department with least enrollments (philosophy) than in the departments with more enrollments.

Of the two professional schools, student demand figured less into the changes made in the business school. The demand for business courses was great during the decade. Also, much of the business curriculum was so prescribed by accreditation requirements as to preclude much change even as the school aspired to grow. (e.g., the school already viewed themselves as having too few faculty to teach the requirements, much less anything new). Four of the five kinds of changes in the business school seemed to have occurred with very little attention paid to students' pursuits. The few business courses which were added were carefully watched, however, to insure an appropriate enrollment.

In contrast, the education school made numerous changes, mostly additions and modifications of courses to their undergraduate program, as the decade progressed. Enrollments decreased and attention was given to maintaining programs (also in keeping with accreditation standards). The faculty, moreover, keenly watched what students were pursuing as they made adjustments in the education curriculum.

With such findings, this research extends the work of Curtis Manns and James March by examining an information feedback process to discover the influence of students pursuits on curriculum change. The purpose of such an examination was to discover what had informed the faculties decisions to make their regular curriculum adjustments. Specifically, the study focused on the reasons William and Mary's
faculty gave for the curriculum adjustments they made during a ten year period.

Manns and March had inferred from statistical data gathered at Stanford that adjustments are made in curricula as an organization attempts to adapt to environmental changes. Further, Manns and March (and earlier, Cohen and March), suggested that curriculum changes remained linked to changing enrollment trends (one part of an institution's environment). This study sought to go beyond the inferences made from statistical data and describe what the decision-makers themselves said had informed their decisions to make routine changes.

In taking this research avenue, the study selectively focused on a portion of Manns and March's theory which dealt with the impact of student enrollment trends on curriculum change. Such a focus offered the advantages of detailed examinations and enhanced description of a particular research area. Limitations were present as well in using such an approach. Since only a portion of Manns and March's theory received scrutiny, analyses and conclusions drawn from the findings of this research were circumscribed by a refined theoretical framework, which looked only at student enrollments and curriculum change. In order to establish the validity of a research perspective attempts should be made in future research to place this selective perspective in the context of the larger theoretical perspective.

There were, moreover, other accompanying limitations of this approach to the research. Although a person's own rationales for past events are subjective, they can nevertheless offer a fuller view of
the events of an age. Not only can one person's recollections be compared to another's, but also the recollections can be contrasted to statistical data or other archival records. This study sought to build upon Hanno and March's work by just such a contrast and comparison process. Rather than making inferences solely from statistics about what had informed the academic's decisions to change, this study asked the decision-makers themselves what had informed their decisions. In turn, the description of William and Mary's faculty concerning their curriculum changes enhanced the research perspective on the topic.

Discovering relationships that might prove to be useful approaches in the analysis of complex problems is another significant aim of exploratory research such as this. Based on a limited sample, this study indicated that some of William and Mary's faculty were influenced by students' pursuits when deciding to add new courses to the curriculum. The study also indicated that for most other curriculum adjustments, the majority of faculty respondents did not appear to be influenced significantly by students' pursuits. Additional research is the logical next step to enhance the description, since these case analyses were confined to limited areas. Additional research would also be needed to increase internal and external validity of these findings.

Better descriptive definitions of the curriculum change variables are needed. For example, respondents varied in their views of what represented a new course versus a substantive modification of an existing course. Respondents also varied in the importance ascribed
to each of the variables. Such things as prerequisite designations, course titles, and course numbers were an important consideration to some, but not to others. A more objective instrument could discriminate between emphasis as well as seek definition precision and fullness.

Furthermore, much of the data gathered depended on individual recall. Although such interviews are appropriate medium to use in a longitudinal study of past events, this method could benefit from closer association with observable behavior than was accomplished in this study. Also, confirmation from knowledgeable associates such as other departmental or school faculty might increase the content validity. Confirmation of respondent recall was ascertained, insofar as was possible, through comparison of reported events with faculty, school, and curriculum committee minutes for the period under scrutiny. Further, respondents were prompted during the interview as to the actual changes which they were asked to explain. Also, in the case of Arts and Sciences departments, comparison of departmental responses with Educational Policy Committee responses served as another confirmation mechanism.

The reliability of measures was checked in three ways. During pilot testing of the interview instrument, alternative wordings and question sequencing for several questions were used to see if they elicited similar responses. Since similar responses ensued, only one of the two wordings, and the same question sequences were used for each respondent in the final instrument. After each interview, the faculty member's responses to appropriately related questions were
compared for consistency. Most responses tended to be consistent or to reflect a consistent pattern within each department or school. Finally, responses were checked against the events as recorded for the decade. There was a careful juxtaposition of the data recorded in College catalogs and minutes with the interview responses. The reliability of these or other measures of curriculum change could be further checked and enhanced by obtaining similar responses from comparable samples of respondents in the other departments at William and Mary and at other similar institutions.

In addition, other variables need further consideration. Size and age of department or school, institutional complexity, field of study, institutional climate, institutional mission, institutional type (public or private) may be variables that could influence the way people view curriculum change or the ways in which regular changes occur. Although respondents indicated that some of these factors influenced the changes they made, the full impact of the aforementioned variables was not tested here due to the limited sample and exploratory aim of the study.

Neither did the study explore family background, personality or individual temperament as a variable affecting the way faculty made and perceived change, the way they viewed and interacted with students. Since the theoretical framework used here suggested that one characteristic of organizational life emerges from people attempting to make meaning of the events surrounding them, exploring the individual personality variable might further delineate the processes involved in the events under scrutiny. For example, one can
hypothesize that people choose various fields of study, people with whom they associate professionally, students with whom they can interact, the kind of information in which they are interested and the like, based on some highly personal characteristics. What is the relationship, if any, between the kinds of changes people make, the way in which they conduct themselves in the committees making changes, and self-image. Further research is needed on the influence of individual temperament in decision-making processes to insure internal validity of this kind of research.

Any insights emerging from longitudinal studies ultimately remain tied to individual recollection, accurate archival data, and appropriate attention to relevant details. All of these can undercut the accuracy of the data: memory can fail, archival data can be biased, and the most relevant of details can be inadvertently overlooked. Thus, a series of longitudinal case studies would help to go beyond the aforementioned shortcomings as well as enhance the descriptive record. Such case studies might clarify the nature of the relationship between students pursuits and curriculum change. The tentative findings here suggest that there may be a mutual influence involved in the relationship. Students' pursuits may influence curriculum adjustments even as the adjustments influence students' pursuits.

How much, if any, of faculty's decision-making could be described as single loop behavior and how much as double loop behavior? Single loop behavior is imitative and rule following while double loop behavior is rule or policy changing. The findings of this study
suggested a pervasiveness of single loop behavior, but did not conclusively verify such. Ongoing longitudinal studies would help to clarify issues of human learning behavior in an academic setting. In turn, the effects of precedent, routine, and history on evolving life in an organizational setting may be better illuminated. Relatedly, reputation was cited in the literature as an influential factor of change. Respondents also indicated an awareness of reputation as it may affect people's perceptions. This study made no attempt to gauge either the reputation of William and Mary or of the departments and schools studied. In turn, this presents a limitation to a study where the implications of reputation are seen as factors influencing the rules, routines, or traditions that serve to channel information.

Finally, external research validity would be enhanced by carefully designed and tested surveys of similar respondent groups in a multi-institutional sample. Such a multi-institutional survey would indicate whether the observations reported here hold for a wider population. The findings of this study remain generalizable only to similar respondent groups in similar institutional settings. Indeed, while academic institutions may appear to be more alike as a group than different, a close-hand view of each institution may also uncover distinctive individual differences. These distinctive differences, in turn, may be shown to underpin institutional adaptability in concert with a group identification or generic characteristics.

In summary, the findings of this study may be expanded in future research in several ways: refining the measures used in this study; controlling for other organizational variables; examining intervening
variables and studying samples differently and from other populations. These approaches would extend the knowledge of how regular curriculum change occurs. Such an understanding could help those in the academy who seek to teach, carry-on research, and perform a public service move toward more productive, effective human exchanges. In the interim, case analyses such as this one can provide important grist for the research mill by offering fuller descriptions of the context of change.
Notes for Chapter 5


4. Faculty outside the Biology Department did indicate that the advent of one course, a 100 level introductory smorgasboard kind of course, represented a flirtation with the student consumer. While biology respondents did indicate that this particular course was, in part, to attract more and different kinds of students, viewed as a healthy attempt to meet heterogeneous interest in biology, they denied any consumer oriented strategies.


Appendix A

POPULATION FOR SAMPLING

Arts and Sciences Departments

In

Rank-order By Number of

Majors Granted, 1971-72 to 1980-81

<table>
<thead>
<tr>
<th>Department</th>
<th>Number of Majors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>1138</td>
</tr>
<tr>
<td>English</td>
<td>882</td>
</tr>
<tr>
<td>History</td>
<td>882</td>
</tr>
<tr>
<td>Psychology</td>
<td>811</td>
</tr>
<tr>
<td>Government</td>
<td>800</td>
</tr>
<tr>
<td>Economics</td>
<td>734</td>
</tr>
<tr>
<td>Math &amp; Computer Science</td>
<td>429</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>379</td>
</tr>
<tr>
<td>Modern Languages</td>
<td>334</td>
</tr>
<tr>
<td>Philosophy</td>
<td>318</td>
</tr>
<tr>
<td>Chemistry</td>
<td>309</td>
</tr>
<tr>
<td>Sociology</td>
<td>304</td>
</tr>
<tr>
<td>Anthropology</td>
<td>254</td>
</tr>
<tr>
<td>Geology</td>
<td>185</td>
</tr>
<tr>
<td>Physics</td>
<td>133</td>
</tr>
<tr>
<td>Theatre &amp; Speech</td>
<td>115</td>
</tr>
<tr>
<td>Music</td>
<td>90</td>
</tr>
<tr>
<td>Classical Studies</td>
<td>75</td>
</tr>
<tr>
<td>Religion</td>
<td>72</td>
</tr>
</tbody>
</table>

Source: This information was obtained from HEGIS Form 2300-2.1 found in the office of the Registrar for 1971-2 to 1975-76 figures; and from the Student Data Book (1980), p. 42 and (1982) p. 51, published by the Office of Institutional Research, College of William and Mary, Williamsburg, VA for 1976-77 to 1980-81 figures.
Appendix 3

INTerview Guide

1. All:
   In your department/school faculty curriculum committee did students participate, either formally or informally, in the discussions?

   If yes, how long have students been participating and in what capacity? How would you describe their participation?

   If no, why not?

2. All:
   You probably received information from a number of sources regarding matters related to the curriculum. Rate each of the following contexts in terms of their usefulness to you in acquiring information about students' concerns with the curriculum. Please indicate: not at all/somewhat/a great deal.
   - in class
   - in reading student evaluations
   - in academic advising
   - in student activities like clubs or honorary fraternities
   - in sitting on committees with students
   - in student organized social or sports gatherings
   - in entertaining students in your home
   - in casual associations with student "friends"
   - in reading the Flat Hat or other student publications
   - in feedback from other faculty

3. Department, School, Curriculum Committee Heads:
   Did your department/school ever discuss either increasing or decreasing the number of majors?

   If yes, what, if anything, was done?

   EPC:
   Did the Educational Policy Committee ever discuss trends in student majors at William and Mary?

   All:
   Did you personally seek information on trends in student majors from college sources or outside sources?

   What do you think were the main reasons for allowing students as of 1976 to have double majors?
Did you support this move? If not, why not?

By 1980, students could also declare minors. What do you think were the main reasons for adding this option?

Did you support this move? If not, why not?

4. Department, School, Curriculum Committee Heads:
Some courses are offered more regularly than others. The catalog lists some as being available occasionally, others every other semester and others every other year. When courses were added to the curriculum, did you decide from the outset how often it would be offered?

If not what kinds of things affected how often a course was offered?

Did enrollments affect how often a course was offered?

Did students ever comment on the availability of these alternating or occasional courses? If yes, what were the comments?

Did students' comments ever contribute to changing the frequency of course offerings?

EPC:
When you approved courses, did you consider how often the course would be offered on an occasional or alternating basis?

If yes, did you make recommendations?

If no, why not?

Did your student members ever comment on the availability of courses offered on an occasional or alternating basis?

Do you think that student enrollments had anything to do with how often some courses were offered? Explain.

5. Department, School, Curriculum Committee Heads:
How were class sizes set?

Did the level of the courses affect decisions about class size?

Did how often a course was being offered affect decisions about class size?
EPC:
Did your committee ever look into the size of classes?
If yes, what was done or concluded?

All:
Did students ever comment on the size of classes? If so, do you recall the kinds of comments?
Did students' comments ever influence any decisions made about class size? How? Any specific instances that you recall?
Do you think that enrollments contributed to decisions made about class size? How so?

6. Department, School, Curriculum Committee Heads:
Give information--
When you proposed changing the number of a course, what were the reasons for it?
Were some reasons more important in your mind than others?

EPC:
When you approved or disapproved changes in course numbering, what were your considerations?
Were some considerations more important than others?

All:
Did you consider how a change in numbering would affect students?
If yes, explain.
Did students ever suggest the need for a change in the numbering of some courses? Do you recall specific instances?
Do you think that some changes in course numbering were made, in part, either to encourage or discourage enrollments in a certain area or at a certain level? Explain.

7. Department, School, Curriculum Committee Heads:
Give information--
When you proposed changing the title of a course, what were the reasons for it? Main reasons?

Give information--
When you proposed changing course descriptions, what were the reasons for it? Main reasons?
EPC:
When you approved or disapproved changes in course titles what were your main considerations?

When you approved or disapproved changes in course descriptions, what were your main considerations?

Did you consider how changing a title of a course would affect students? If yes, explain.

Did you consider how changes in course description would affect students? If yes, explain.

All:
Did students ever suggest the need for a change in title? In description?
For courses that did not change in title or description over the decade, would you say that most of them nevertheless changed in content somewhat?
If not, why not. If yes, how would you characterize these changes?

How much do you think these kinds of changes were influenced by things students said (like in student evaluations)?

Do you think that some titles were changed either to encourage or discourage enrollments in certain areas? How so?

Do you think that some course descriptions were changed either to encourage or discourage enrollments in certain areas? Explain.

B. Department, School, Curriculum Committee Heads
Give information--
When your department/school proposed adding or substantively modifying courses, what were the reasons for it? Main reasons?

When courses were added or substantively modified, did you have any difficulties in getting students to take them?

Were any courses ever added or modified at the suggestion of students?

Were any courses ever added or substantively modified in hopes of attracting more or different kinds of students? Explain.

EPC:
When your committee approved or disapproved the addition of new or substantively modified courses, what were your major considerations?
Did your committee ever keep track of whether students were taking new courses that it had approved?

If not, do you think it would be worth doing? Why?

Do you think that new courses were ever proposed in hopes of attracting more or different kinds of students?

9. Department, School, Curriculum Committee Heads:
   Give information--
   When your department/school proposed dropping a course, what were the reasons?

   How long did you generally keep a course on the books before dropping it from the curriculum?

   EPC:
   When a department proposed dropping a course, did the committee ever disapprove it? If yes, why?

   All:
   Do you think courses were ever dropped due to low enrollments?

   Do you think courses were ever made a requirement due to low enrollments?

10. Department, School, Curriculum Committee Heads:
    Your department/school changed/did not change the number of credits required for majors during this period. For instance........What were your reasons for proposing these changes? If not change, did you ever discuss it? What were the reasons for remaining the same?

    EPC:
    When changes in credit requirements for majors were approved or disapproved, what were the primary considerations of the committee?

    All:
    Did students ever suggest the need for a change in credit requirements for majors?

    Were credit requirements for majors ever changed with the idea of either discouraging or attracting more or different kinds of students to major?
11. Arts and Sciences Department, Curriculum Committee heads
   During the ten year period, your department increased the number of courses that satisfies area and sequence requirements. Why?
   (Give information)

   Did students ever comment on the number of courses with area and sequence designation in your department? If yes, did their comments influence your decisions to increase?

   Did you increase courses with area or sequence designation, in part, to make more courses accessible to students filling general education requirements?

   EPC:
   Did your committee monitor the number of courses in each department carrying area or sequence designation?

   Have students ever commented on area and sequence designations in a department to your committee? If yes, did it influence any decisions you made about them?

   Do you think that area or sequence designations were added to courses to make more courses accessible to students filling general education requirements?

   Education and Business:
   None of your courses carried area or sequence designations. Did your students comment on this? If yes, what kinds of comments?

   Do you think this affected the way students viewed your curriculum? How so?

12. Department, School, Curriculum Committee Heads:
   In your department/school, the number of courses that could be taken without having had some other prerequisite course increased/decreased/stayed the same over the ten year period. Give information--Who primarily decided when a prerequisite requirement was needed?

   What were the reasons given?

   Has your department/school ever discussed the number of courses that you offer requiring a prerequisite? Explain.

   All:
   Do you think that prerequisite requirements were used, in part, either to encourage or to discourage student enrollments in certain areas? Explain.
EPC:
When a request for prerequisite designation was filed, what were your considerations?

Have students ever commented to your committee about the number of courses in the curriculum that require prerequisites? If yes, did it ever influence your decisions regarding prerequisites?

Did your committee ever discuss leaving some courses at each level in all departments without prerequisites?

Do you think that prerequisite requirements were used, in part, either to encourage or to discourage student enrollments in certain areas? Explain.

13. All:
The number of students in courses and majors represents one consideration in regard to organizing a curriculum. How much do you think enrollment considerations influenced the following kinds of changes made in your department/school/committee? Please indicate: not at all/somewhat/a great deal.
- change in numbering
- change in titles of courses
- change in descriptions of courses
- addition of courses
- deletion of courses
- modification of courses
- change in credit requirements for majors
- change in area/sequence designation
- change in number of courses without a prerequisite requirement

Were there any other reasons for these kinds of changes that we have not discussed?
Appendix C

LETTER TO SAMPLE POPULATION

Dear ___________.

The normal drift of an undergraduate curriculum occurs as faculty make adjustments in their respective programs and students select from the available options. Currently, I am examining some of the normal adjustments in William and Mary's undergraduate program from 1971-72 to 1980-81. To explore the relationship between the courses and concentrations students pursued and regular changes in the curriculum, I began by collecting data on trends in student enrollment and on changes in such curriculum characteristics as course numbering and course title or description.

Now, I would like to interview you to discuss your perceptions of those changes. In particular, I am interested in your views on the relationship between students' academic pursuits during this period and curricular changes that were made. Since you participated in making decisions about curriculum change, your insight will add the kind of information that could help me go beyond simple chartings of trends and draw fuller descriptions of student enrollments and curriculum change at William and Mary.

I will contact you by telephone later this week to arrange a convenient time for an interview, should you agree to participate in this research. While the length of interviews will undoubtedly vary, I anticipate that approximately an hour of your time will be needed. You may be assured of the confidentiality of your responses.

Thank you for your consideration. I look forward to meeting with you soon.

Sincerely,

Anne M. Pratt
Doctoral Candidate in Higher Education
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BIBLIOGRAPHY


Vita

Anne M. Pratt

Birthdate: December 5, 1947

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Education:

1980-1984  The College of William and Mary in Virginia
           Williamsburg, Virginia
           Certificate of Advanced Graduate Study in Education
           Doctor of Education

1976-1977  The College of William and Mary
           Master of Arts in Education

1966-1970  The College of William and Mary
           Bachelor of Arts

Professional Experience:

1983-Present  Assistant to the Vice President for University
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              The College of William and Mary
              Williamsburg, Virginia

1980-1983  Research Assistant
           School of Education
           The College of William and Mary
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1976-1977  English Instructor
           Our Lady of Lourdes School
           Columbus, Georgia

1971-1973  Vocational Counselor
           Army Education Center
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1970  English Instructor
       Dan River High School
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Abstract

MAKING ROUTINE CURRICULUM CHANGES AT THE COLLEGE OF WILLIAM AND MARY IN VIRGINIA: ARE FACULTY INFLUENCED BY TRENDS IN STUDENTS PURSUITS?

Anne M. Pratt, Ed.D.

The College of William and Mary in Virginia, September 1984
Chair: Mary Ann D. Sagaria

In a study published in 1970, Curtis Manns and James March found that university curricula do change in response to financial adversity. From their examination of curriculum change at Stanford, Manns and March concluded that "however diffuse the procedures by which a university increased the variety in course offerings, improved the packaging and advertising for courses, made courses more accessible, and increased direct student benefits from courses, those procedures . . . moved . . . in the direction of trying to stimulate demand . . . ." Based on a model proposed by Cohen and March, Manns and March said that it was necessary for departments to stimulate demand for enrollment in order to secure resources. They proposed that competition for resources would encourage competition among departments. Departments most in need of maintaining demand would change most; those least in need of maintaining demand would change least.

Manns and March also noted that academia has traditions about change. Thus, the changes they found may not have entirely been the result of departmental competition for resources. There may have been other considerations that contributed to academic's decisions to change. March further suggested that the research would benefit from
better descriptions of change behavior. Therefore, to extend Manns and March's work and to discover what kinds of things had informed academic's decisions to make curriculum changes was the aim of this research.

Through interviews with department, school, and curriculum committee heads at William and Mary, this study sought to discover the reasons these people gave for certain curricular changes they made from 1971-72 to 1980-81. Representatives from three arts and sciences and departments and two professional schools were asked to recall the kinds of things they had considered when changing six different curricular attributes. The six curricular attributes examined were: 1) course numbers; 2) course titles and descriptions; 3) course additions, deletions, modifications; 4) credit requirements for majors; 5) area/sequence designation; 6) courses without prerequisite designation.

This study found that in all five groups studied, student enrollments had been a consideration in the changes made in one curriculum attribute—the addition or substantive modification of courses. For the five other attributes examined, other factors were considered rather than student demand. These other factors consisted variably from one group to the next of such things as change in the discipline, change in texts, change in faculty teaching loads, change in faculty members, change in departmental emphasis, and change in accreditation of certification requirements.

Moreover, each group examined viewed the importance of each of the six curriculum attributes differently. So also did each group
vary in the kinds of attention 'given to students' pursuits. In
general, the departments and schools were described as making these
six kinds of changes within group-specific routines and operating
procedures.